

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



BETTER FRUIT

VOLUME X

OCTOBER, 1915

NUMBER 4

National Apple Day—Always the Third Tuesday in October
Let everybody celebrate National Apple Day



Courtesy of Oregon-Washington Railroad & Navigation Company.

CHARACTERISTIC HIGHWAY STRUCTURE AT SHEPPARDS DELL, ON THE COLUMBIA RIVER HIGHWAY BETWEEN PORTLAND AND HOOD RIVER.

The Columbia River Highway is the "Appian Way" of the Pacific Coast, built not alone with an eye to simplicity, but for rugged strength and endless use as well. The Columbia River Highway lies along the Columbia River, parallel with the Oregon-Washington Railroad & Navigation Company's tracks, which are seen in the immediate foreground. This road is one of the scenic wonders of the world. The completed portion is hard surfaced. This is the beginning of a highway from the Pacific to the Atlantic.

"Health's best way
Eat apples every day"

Buy them by the box

"An apple a day
Keeps the doctor away"

BETTER FRUIT PUBLISHING COMPANY, PUBLISHERS, HOOD RIVER, OREGON

Subscription \$1.00 per Year in the United States; Canada and Foreign, Including Postage, \$1.50.

Single Copy 10 Cents

These Goodyear Tires Made Extra-Large

Sizes 30x3 $\frac{1}{2}$ and 30x3

We are this year giving special attention to users of small-size tires. There are about a million of them. And the tire we build would win them all if all of them could know about it.

\$317,000 Added

This year we are building these tires larger than ever. We've increased the air capacity by 20 per cent. Added size means added mileage, as every user knows.

We have added 30 per cent to the rubber in the side walls just above the bead. That's where constant bending taxes tire walls most. And where thin-walled tires often chafe and break.

We have made new molds to improve the tire's design. For we have found a new shape which increases endurance.

These three additions will add to our tire cost \$317,000 this year. Yet this year we made another big price reduction—our third in two years, totaling 45 per cent.

Four-Ply Tires

Even the smallest Goodyear Automobile Tires are

four-ply tires—even size 30x3. And our anti-skid tread—the Goodyear All-Weather—is double-thick on all.

So Goodyears have always been exceptional tires. They won on sheer merit the top place in Tiredom, and for years have out-sold any other.

Now we add 20 per cent to the air capacity and 30 per cent to the rubber above the bead. And we give you a better design. We are building by far the most capable tires ever built in these small sizes.

So even the occasional mishap and misuse will find new strength to combat them.

Get These Extras

The value we give in Goodyear tires is due to our mammoth output. Get that value—it is due you. Smaller, thinner, lighter tires can't serve as Goodyears do. Even last year's Goodyears, though the leading tires, could not compare with these.

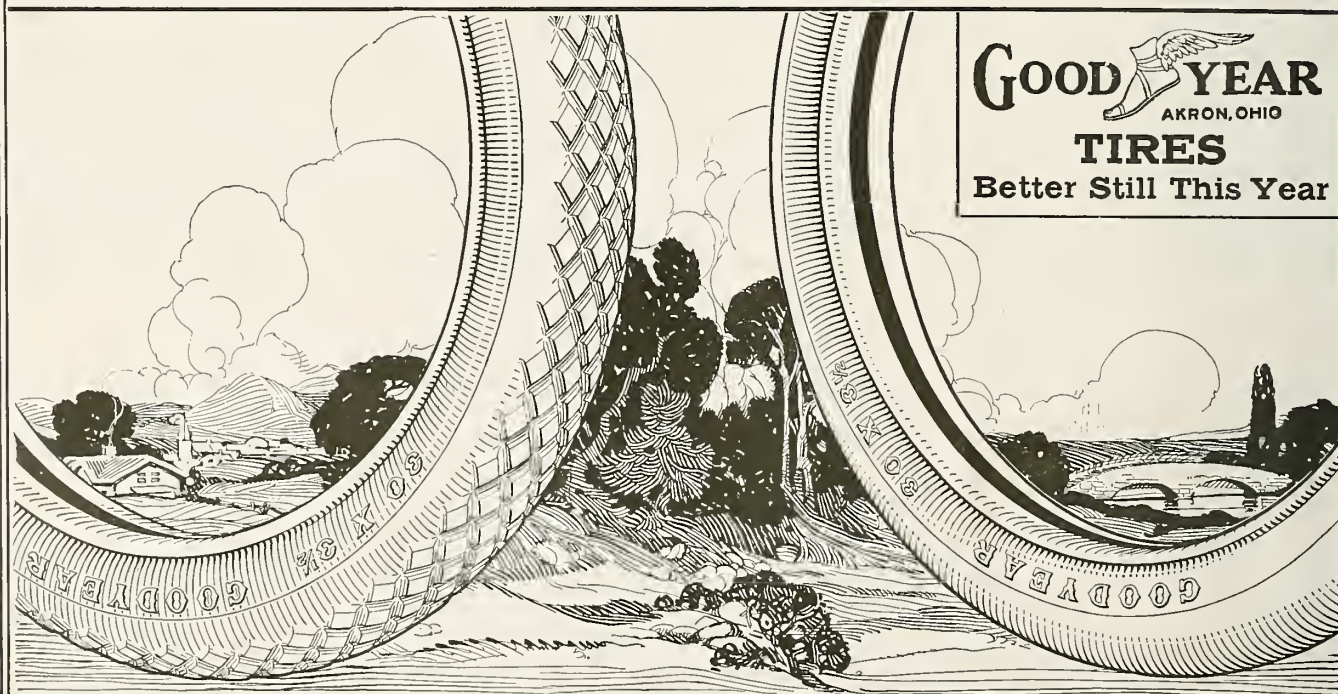
Any Goodyear dealer will supply you. Every neighborhood has a Goodyear Service Station with your size in stock, and it renders full Goodyear Service.

(2648)

**20% More Capacity
30% More Strength
In Side Walls**

The Goodyear Tire & Rubber Company, Akron, Ohio

Makers of Goodyear "Tire Saver" Accessories; also Goodyear "Wing" Carriage Tires and Other Types



GOOD YEAR
AKRON, OHIO
TIRES
Better Still This Year

SIMONS, SHUTTLEWORTH & CO.

LIVERPOOL AND MANCHESTER

SIMONS, JACOBS & CO.

GLASGOW

GARCIA, JACOBS & CO.

LONDON

Agencies and Representatives in Every Important European Market

European Receivers of American Fruits

FOR MARKET INFORMATION ADDRESS

Simons, Shuttleworth & French Co.
204 Franklin Street, New YorkSimons Fruit Co.
Toronto and MontrealSimons, Shuttleworth, Webbing Co.
46 Clinton Street, Boston

OUR SPECIALTIES ARE APPLES AND PEARS

**FOR QUALITY SALE**

See our "Ad" in the PACKER. We are selling to the trade all over the United States under this heading. Would you like some of your fruit placed on the same basis?

BOX APPLES

AUCTION, PRIVATE OR F. O. B.

We want to hear from every grower in your section who has fruit of quality

Ship Direct
One Commission**SGOBEL & DAY, New York**

The Old Reliable

BELL & CO.

Incorporated

WHOLESALE

Fruits and Produce112-114 Front Street
PORTLAND, OREGON

W. H. DRYER

W. W. BOLLAM

DRYER, BOLLAM & CO.

GENERAL

COMMISSION MERCHANTS

128 FRONT STREET

PHONES: MAIN 2348
A 2348

PORTLAND, OREGON

Mark Levy & Co.COMMISSION
MERCHANTS**Wholesale Fruits**121-123 FRONT AND
200 WASHINGTON ST.
PORTLAND, OREGON**LEVY & SPIEGL**

WHOLESALE

FRUITS AND PRODUCE

Commission Merchants

SOLICIT YOUR CONSIGNMENTS

Top Prices and Prompt Returns
PORTLAND, OREGON**STORAGE**Ship your Furniture
to us to be stored
until you are located**TRANSFER & LIVERY CO.**
Hood River, Oregon**Orchardist
Supply House****Franz Hardware Co.**

HOOD RIVER, OREGON

Richey & Gilbert Co.

H. M. GILBERT, President and Manager

Growers and Shippers of

**YAKIMA VALLEY FRUITS
AND PRODUCE**Specialties: Apples, Peaches,
Pears and Cantaloupes

TOPPENISH, WASHINGTON

Established 1893

W.P. KRANER & CO.**Importers and Tailors**

2nd Floor Couch Bldg.

109 Fourth Street

Portland, Ore.

Geo. E. Kramer

C. W. Stose

SHIP YOUR APPLES AND PEARS TO THE PURELY COMMISSION
AND ABSOLUTELY RELIABLE HOUSE

W. DENNIS & SONS, Ltd.

LONDON AND LIVERPOOL

REPRESENTED IN NEW YORK BY

DENNIS, KIMBALL & POPE, Inc.

202 FRANKLIN STREET

From whom all information as to shipping can be obtained

The War is Over

Who Won, England or Germany?

Neither

BUT THE ENGLISH WALNUT—IN THE

Vrooman Strain Franquette

—Won as to its Adaptability to the Soil and Climate of the Northwest.

We carry a full line of both Second Generation and Grafted Trees.

Also a full line of fruit trees, ornamental trees and shrubbery, and have added many new specialties. We are in a position to supply the fruit grower with his needs.

Always room for one more good salesman.

Capital City Nursery Company

SALEM, OREGON



Who is sure

of future protection who has not saved money today? It is your plain business of life to consider this question. Opening a savings account in this bank is an easy matter. Rigorous state bank laws give you every protection.

LIBERAL INTEREST PAID
ON SAVINGS ACCOUNTS

Ladd & Tilton Bank

Oldest in the Northwest

PORTLAND
OREGON

Resources Over Fourteen and
One-Half Million Dollars

BRAND NEW, BEAUTIFULLY ILLUSTRATED—CONTENTS RIGHT UP-TO-DATE

Bailey's New Standard Cyclopedia of Horticulture

WILL INCREASE THE EFFICIENCY OF YOUR EMPLOYEES

BAILEY'S Standard Cyclopedia of Horticulture should be close at hand for quick reference by every member of your force, because it presents the combined labor and experience of the foremost North American authorities on horticultural subjects. These six magnificent volumes place at the disposal of the horticulturist, whether practical, amateur or scientific, an ample and readily accessible account of every subject which at any time may be of interest or practical use in his calling. Its range is wide, covering plants, flowers, vegetables, trees, tillage processes, tools and implements, cultural discussions, botanical history, geography, commercial markets, and a myriad items that only constant use will reveal. The scope of the volumes has not been confined to botanical subjects alone, but every subject in any way incident to the activities of the horticulturist has been fully covered, commercially as well as scientifically.

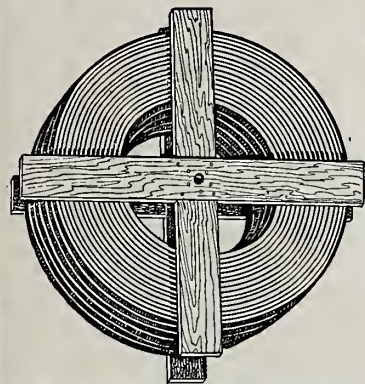
Six large quarto volumes. More than 3,600 pages. 24 full-page exquisite color plates. 96 beautiful full page halftones. More than 4,000 text engravings. 500 Collaborators. Approximately 4,000 genera, 15,000 species and 40,000 plant names.

"The immense wealth of practical horticultural facts and teachings contained in this work, and the ease with which they are found in it, place Bailey's STANDARD CYCLOPEDIA OF HORTICULTURE at the top. In other words, it is the Monarch of Horticultural Literature."

Three volumes now published. Write us for 16-page Prospectus containing Complete Description and Our Special Offer.

BETTER FRUIT PUBLISHING CO., Hood River, Ore.

Spend a Nickle and Save a Dime



No. 3 Peerless Duplex Strapping in coils of 6,500 feet each—\$14.63 per coil with liberal discount.

No. 3 Duplex Strapping is made of high grade Cold Rolled Steel of considerable tensile strength and pliability. The turned edge protects the packer's hands; the knurled center prevents the nail from slipping while being driven.

Use Peerless Duplex Strapping ON YOUR Shipping Boxes

and

- (1) You will prevent pilfering.
- (2) You will prevent damage in handling.

Discounts and Information from Pacific Coast Representatives

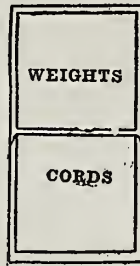
A. C. RULOFSON CO.

No. 359 Monadnock Building, San Francisco, California

TWISTED WIRE AND STEEL CO.

515-521 Greenwich Street, New York, N. Y.

BUY DIRECT FROM FACTORY—
MONEY SAVED ON BUILDING



WINDOWS Sash and Glass Frames and Finish

24x28-1 3/4-2 light window
\$1.10

FRONT DOORS
SASH PANEL
DOOR FRAMES
DOOR FINISH
DOOR HARDWARE
Door 2:6x6:6
5 cross panels **\$1.10**

DIAMOND HOUSE PAINT

Strictly Pure, Our Own Make
Per Gallon, **\$1.75**

LEADS, OILS, VARNISH
CARBOLINEUM
CREOSOTE



PORTLAND DOOR AND WINDOW CO.
230 Front St., PORTLAND, ORE.

SEE CALIFORNIA AND HER TWO GREAT EXPOSITIONS NOW

California is this year holding two great universal Expositions, one at San Francisco and the other at San Diego, in celebration of the completion of the Panama Canal and the joining of the Atlantic and Pacific Oceans. These two Expositions represent an expenditure exceeding one hundred million dollars. To supply the demand for reliable and authentic information on these Expositions and California, we have published two beautiful books; one on San Francisco, the Exposition and Northern California; the other on Los Angeles, San Diego, the Exposition and Southern California; also a lithographed view of San Francisco in colors (size 30x45 inches), a picture of the rebuilt city, including the Exposition. Each book is 6x9 inches, contains nearly 200 pages and many beautiful illustrations.

These two books and large bird's-eye view give a comprehensive, honest history and description of the state, her principal cities, resources and her two great Expositions. Sent prepaid for 35 cents each or all three for a one dollar bill, money order, draft or check. Order now, addressing

North American Press Association,
Publishers,
1420 Hearst Building, San Francisco.



LEWIS AUDIBLE SPEED INDICATOR

The "Missing Link" that attaches to any Cream Separator for any speed. Rings a warning bell while under-speeding. Clicks loudly at the right speed and at over-speed is silent. Increases yield of butterfat and insures uniform tests at creamery. Descriptive circulars on application. Postpaid \$3.25. Liberal terms to agents.
Columbia Dairy Supply Co.
Portland, Oregon

The Great Big Baked Potato Is a Winner on the Northern Pacific Railway

But its whole dining car service is in a class by itself, in excellence of cooking the best the markets afford, the variety and attractiveness of the menu, the pleasing manner in which served.

Have your ticket read that way and be convinced

Daily Through Trains to the East

Board them at Portland, Tacoma, Seattle, Spokane, or other main line points in Pacific Northwest



Regardless of where you are starting from, ask the Local Agent to ticket you via this popular line, or write for full information to—

A. D. CHARLTON

A. G. P. A.

Portland, Oregon



ORCHARDISTS find sand cultivation difficult. Until a recent date no suitable tractor had been placed on the market that met this peculiar condition.

THE YUBA BALL TREAD TRACTOR has met and successfully overcome this difficulty. Its distinctive features have made this possible.

The Ball Tread does not sink in the sand. The balls are large enough to crush any particles of sand that enter the ball race. The compactness of the machine permits it to run under the fruit-burdened branches without injuring them.

The unique transmission allows the machine to get close to the trees and

eliminates one man from the plow; because the full power of the motor can be thrown on one tread it is unnecessary to lift the plow in going from one row to another.

Yet the Yuba Ball Tread Tractor has power enough to work equally as well in heavy adobe soil as in the shifting sand.

THE YUBA CONSTRUCTION CO.

Factory at
Marysville, California 433 California St., SAN FRANCISCO, CALIFORNIA

THE YUBA BALL TREAD TRACTOR

THE YUBA CONSTRUCTION CO.
433 California Street,
San Francisco, California
Department C-2

Gentlemen:
Kindly send me a copy of your booklet "The Yuba Ball Tread Tractor."

Name

P. O. Box

Town

State

Size of Farm.....acres.

CHECK MAIN CROP RAISED

Fruit Rice

Grapes Alfalfa

Grain Hops Hay

"PERFECT" Cement Coated Nails

OUR PRODUCTS ARE OF SUPERIOR QUALITY
AND GUARANTEED TO GIVE SATISFACTION.

PRICE and QUALITY always right.

PITTSBURGH STEEL COMPANY, Pittsburgh, Pa.

A. C. RULOFSON CO.

"The Cement Coated Nail People"

Monadnock Building, SAN FRANCISCO, CALIFORNIA
PACIFIC COAST SALES MANAGERS

W. van Diem

Lange Franken Straat 45, 47, 49, 51, 61

ROTTERDAM, HOLLAND

European Receivers of American Fruits

Eldest and First-Class
House in this Branch

Cable Address: W. Vandiem
A B C Code used; 5th Edition

Our Specialties are

Apples, Pears, Navel Oranges

BETTER FRUIT

AN ILLUSTRATED MAGAZINE PUBLISHED MONTHLY IN THE INTEREST OF MODERN, PROGRESSIVE FRUIT GROWING AND MARKETING

The Study of Fruit-Buds

By E. J. Kraus, Oregon Agricultural College, Corvallis, Oregon.

IF the fruit-buds are regarded as the actual fruit-manufacturing machinery of a tree, it is necessary to know something of where they are located, how and when they are formed, and how they should be treated. For convenience, they may be classified according to their particular location on the tree, namely, terminal buds (on shoots), axillary buds (on shoots) and

though at times from that which is older. They develop either from single terminal buds, as is general in plums and prunes or from one to several lateral buds, as in apples and pears. Depending on variety and environmental conditions, these annual increases in length may vary from a fraction of an inch to several inches, with the result that the older spurs may be very compact, or loose and spreading. In some instances large spurs consist of as many as forty or fifty buds on more or less angled branches. A fruit-spur, then, may be a single short branch bearing one or a few fruit and leaf buds, or a large aggregation of such branches which arise from one another.

The proportions of the several classes of fruit-buds vary greatly, according to the kind and variety of fruit. In the peach, particularly, all the fruit-buds are axillary and borne on one-year wood. Some of the annual branches are so short that they might be regarded as spurs perhaps, though the proportion of buds borne on such spurs, as compared to the total number on the tree, is small. In this particular class of fruits the fruit-buds, which usually contain one or sometimes two flowers, are borne singly on one side or the other of the leaf-buds, or in pairs with a leaf-bud between them. They are usually more numerous toward the tips of the branches, though when the trees have been properly kept open to admit light and air they are plentiful on the smaller laterals and scattered well along the branches, except at the bases of the larger ones. In the plum and prune fruit-buds are borne both on one-year shoots and on spurs. Most Japanese varieties have large quantities of axillary buds, much as has the peach, except that frequently there are more than two buds at each node. The number of axillary buds on one-year-old wood in the case of the common varieties of prunes should be regarded as small as compared with those on spurs, though one-year-old spurs are often prolific bloomers. The sweet cherry bears its fruit-buds either on spurs or as

axillary buds on one-year-old wood. If the one-year branches are of any considerable length, it is worthy to note that the fruit-buds on them are borne near the base, or at least the basal one-half. Apples and pears may be considered together, since the methods of fruiting are similar. The fruit-buds are borne on spurs, as axillary buds, or terminals on one-year wood. Varieties vary greatly in this regard. Some have a large proportion of their fruit-buds on one-year wood, especially while young, while others bear very few such buds, having practically all, except a very few terminals, borne on spurs which sometimes are present on one-year wood. Attention is called to the fact that, normally, the axillary fruit-buds are borne near the tips of the branches instead of the base, just the reverse of the condition prevailing in the sweet cherry.

In apples and pears it is frequently objectionable to have fruit borne at or near the tips of long one-year branches, because such branches are bent with the fruit and become misshapen, are swayed with the wind, and thus bruise not only the fruit they bear but all in the immediate vicinity, and tend to bring the fruit to the very outside of the tree, so that even a light load is apt to cause breaking. Yet it is undesirable at times to remove all such fruit-buds, because they may constitute a large proportion of the entire crop. If it were possible it would be of much greater advantage to have them borne on short laterals so that they might be



FIGURE 15. Bartlett pear twigs showing at *a* numerous axillary buds; *t* terminal buds; *f* a fruit-spur which bloomed last year but set no fruit and from which vigorous side branches have grown; *b* fruit-spurs which bore fruit last year and are producing blossoms this year at *s*.

those borne on spurs. The terminal fruit-buds are those which are at the very tip or terminus of a shoot. In certain varieties of apples such as Jonathan, Gravenstein, Newtown and others, and in some varieties of pears, notably the Bartlett, Winter Nelis and Angouleme, much of the first crop of fruit-buds is borne terminally on shoots. The axillary buds are also borne on one-year-old wood, but on the sides of the shoots instead of at the tips. The third class of buds, those borne on spurs, which are really nothing more nor less than very short branches, are borne either singly or in aggregations of twos, threes or many. Generally they are developed first from either one or two-year-old wood,



FIGURE 16. Bartlett pear. At *s* fruit-buds produced laterally from a spur which bore last year.

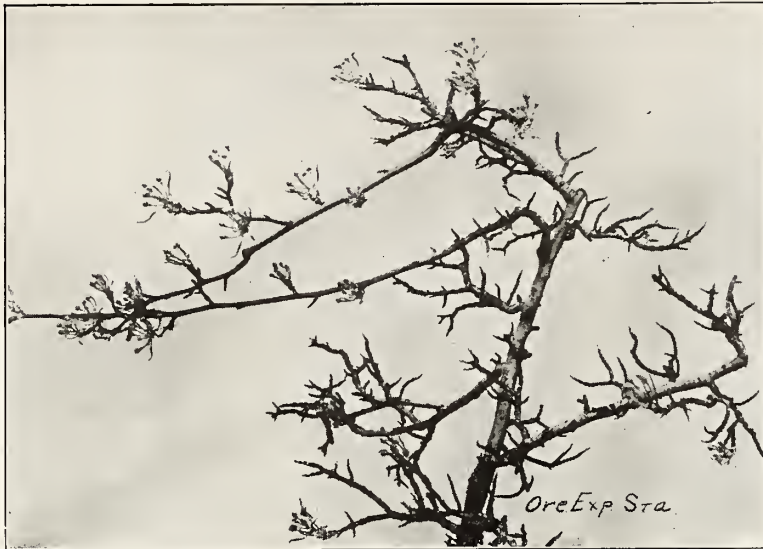


FIGURE 17. Winter Nelis. Fruit branch taken from an old tree. Note that the greatest number of fruit-buds are borne on vigorous new wood produced by thinning out old spurs. The old unpruned spurs bear mainly leaf-buds.



FIGURE 18. Bartlett pear. Old spurs which have been blooming annually but setting a very small number of fruits. At *a* spurs which bloomed but set no fruit, some of them again producing fruit-buds the following season.

saved to produce fruit. Such a condition actually can be brought about, especially with young trees, through a method of early summer pruning, whereby some of the branches, instead of being allowed to grow normally, are headed back sufficiently early in the season to allow laterals to spring from them and develop terminal and even axillary fruit-buds.

The amount of pruning to be done in winter on any variety of fruits so as to produce the maximum number of fruit-buds depends upon so many factors that no specific recommendations can be made. Two facts must be observed, however, when dealing with normal apple or pear trees of average vigor, and, in a general way, all other deciduous-tree fruits. First, if a large amount of wood is removed in heading back a one-year-old branch, lateral branches, and not fruit-buds, will be produced from the remainder. Second, if the heading back is very slight, fruit-buds may and are apt to be produced, but they are likely to be borne near the

cut, with the result that below them few or none of the buds will break and long barren spaces on the branches will exist. It is a safe rule to bear in mind that the greatest influence is felt in the vicinity of a pruning cut. Thus, if a long branch is cut back severely, the greatest growth response will come near the point of cutting, though there will be some response throughout the whole limb. Or again, if a dense or tall pear tree, for example, has the top cut back without a thinning out or cutting back of the remaining branches, the first or greatest response will be near the cut. This principle is of importance in pruning very old trees in which masses of spurs have been formed, but which are not producing annual profitable crops. Annual crops of bloom are produced, but the crop of fruit is light, and what is produced is often inferior. In such cases it would be better to remove some spurs entirely and thin out others in order again to bring about a vegetative response directly within the remaining spurs themselves rather

than to take out many large branches or merely to cut back the top or saw off the ends of all large limbs. Such a spur pruning may not be advisable each year, but will serve as an occasional rejuvenating means. The removal of some branches will probably be necessary in conjunction with the spur thinning, and of course the removal of all dead wood is essential. The main point to be emphasized, however, is this: There will be less unbalancing of the trees and more real stimulation to fruit production if the cutting is distributed rather than more or less localized. Figure 18 represents part of two very old spurs. They have been producing fruit-buds and flowers for many years, but have matured but few fruits, due to a lack of vegetative vigor. Figure 20 shows a portion of a spur which had been thinned and shows a strong, almost too vigorous vegetative response as a result, while Figure 22 illustrates how these vegetative shoots again become strong fruit spurs in the course of two or three years.

In this connection attention is called to those lateral branches of moderate length which bear terminal fruit-buds and are frequently abundant in young trees just coming into bearing. If not excessively long, say not over twelve inches, it is the best policy not to remove the terminal bud, since if it is left to remain the chances of having the lateral buds on such a branch develop into fruit-spurs are much greater than if the branch is headed back. Even if fruit does not set from such a bud, the beneficial effect is greater if it is not removed. Of course if the branch is excessively long and limber head it back. Frequently, in pears and in many varieties of apples, such laterals of from three to eight inches in length, if left alone become the first really productive areas of the tree, but are ruined if removed or heavily cut back. This statement is in no way intended to discourage the practice of shortening in or heading back those more or less numerous lateral, vegetative branches which frequently grow in large numbers in the lower inner portions of young trees. In fact there is reason to believe that if some of these branches are allowed to remain and are cut back to three or four inches in length they can be developed into early and valuable fruiting wood.

The time or season during which fruit-buds are formed is a matter worthy of consideration. The practice of summer pruning largely hinges on such a knowledge, because if the pruning is done at one season of the year, and is to have an immediate effect, sufficient time must be allowed for fruit-buds to develop during the part of the season which remains. The amount of cutting that may be permissible early or late in the season is entirely different. Early summer pruning may, and sometimes should, be heavy to bring about a vegetative response, while a late summer pruning must be light in order that a heavy vegetative response may be avoided. Too late a summer pruning may fail of its purpose abso-

lutely, either by forcing worthless vegetative shoots or causing leaf buds to start which do not have sufficient time for reorganization into fruit-buds. Roughly speaking, trees have a growth period and a dormant period, though in fact certain changes are going on throughout most of the dormant period. Changes take place within a bud and determine whether it will become a leaf or fruit-bud in the apple or pear as early as the latter part of June and proceed throughout the summer and fall. The very beginnings of fruit-buds are also visible as late as the latter part of August, so that apparently there is actual differentiation of buds occurring throughout the summer. Usually this differentiation takes place first in the buds on the spurs, then those in the axils of the leaves, and finally in the terminals. Depending on conditions, the order may vary, depending on the vigor and growth of the shoot, especially among the terminals. In fact the order may be reversed, or they may form at about the same time. With minor exceptions fruit-buds for these particular fruits go into the winter in practically the same state of development. But slight advance takes place during the early part of the dormant season. Later numerous microscopic changes go on, and these, in late winter and early spring, occur even more rapidly, until finally the swelling of the buds becomes very evident and blooming follows in course of time. Knowing the period at and during which fruit-bud formation takes place, one is better able to modify orchard practices so that the best possible conditions for their development can be brought about. Such buds are influenced by many conditions other than pruning, such as moisture, light, air and food, but it is the former means with which this discussion is most concerned.

The relation or balance which seems to exist between the so-called vegetative or growth tendencies and the reproductive or fruit-producing powers of a tree is a delicate one and can be brought about or maintained only by the careful observation of each individual tree and its response to any treatment given. Suffice it to say that it is easily possible to have too many fruit-spurs or fruit-buds in a tree; so many in fact that the energies of the tree appear to be used up merely in the production of bloom, and such fruit as may be produced is inferior both in size and quality, as previously pointed out. The aim must be to produce or maintain, not the greatest possible number of spurs, but the most efficient fruit-spur system, which means that the spurs shall be evenly distributed throughout the whole tree, that there shall be ample room between and among them, and that they be healthy and vigorous. The same ideas as outlined for fruit-spurs hold true for the fruit-buds of the peach. While the total number of fruit-buds produced might be greater on an unpruned tree, and it is true that large numbers of them are lost from winter pruning, yet it is better to remove some branches



FIGURE 19. Bartlett pear. Old spurs which have set an average number of fruits in previous years. At *a* spurs which bloomed but set no fruit, again producing fruit-buds for the following year. At *b* the same, except no fruit-buds produced.



FIGURE 20. Bartlett pear. Vigorous vegetative response from thinning spurs. Terminal fruit-buds at *t*; axillary fruit-buds at *a* on one-year shoots.

entirely and to shorten back others and admit light and air into the tree to strengthen the remaining buds and maintain proper vegetative condition than to allow it to spread out and lose practically all its lower and interior fruiting area and produce only at the ends of the branches toward the outside. Finally, then, it is necessary that a careful study be made of the fruit-bud-producing habits of any variety under any given set of conditions. There are localities in which trees tend to produce an excess of fruit-buds when com-

pared with the production of vegetative shoots and care must be exercised in pruning that the ideal relationship be maintained by either a heavy heading back or thinning out. Again the tendencies may be in the opposite vegetative direction, and unless great care is exercised the trees are unproductive or do not come into bearing for many years. In such cases great caution in heading back must be exercised, and frequently methods of control other than pruning must be resorted to. The question of annual bearing of varieties is of great importance to every fruit-



FIGURE 21. Bartlett pear. A good vegetative response from thinning spurs. Note the numerous fruit-buds at *s* on spurs which did not break into long branches. Terminal buds at *t* and axillary buds at *a* on one-year shoots.

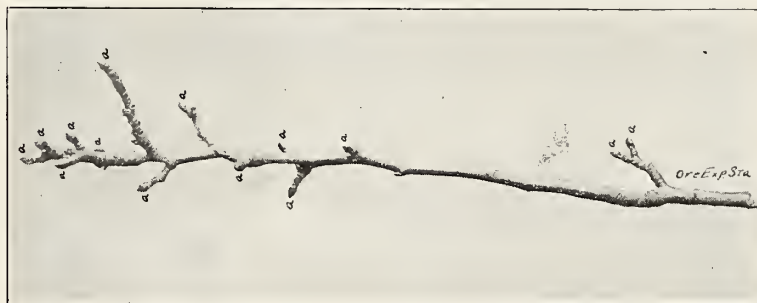


FIGURE 22. Bartlett pear. A vigorous shoot produced from an old spur which has been pruned, now in a healthy productive condition. Note the numerous fruit-buds present.



FIGURE 23. Large branches from an old Bartlett pear tree. Numerous fruit-spurs but very light vegetative growth.

grower. It would be a difficult task to make all varieties of apples annual bearers, since if it is not a characteristic of any variety so to bear special methods of pruning or culture would be required to change the entire constitution of the tree. On the contrary, some varieties will bear annually even under the most adverse conditions. Generally speaking, those varieties which produce fruit-buds liberally on one-year wood, either as axillaries or terminals, come into bearing younger,

and are more likely to bear annually than those which bear on spurs exclusively. It should not be overlooked nor forgotten that while it may be normal for spurs to bear only during alternate years, such is by no means always the case, and blooms and even fruits are often produced each successive year for a number of years. This is notably true of several varieties of pears, especially the Bartlett, which like the Wagener and Jonathan apples is an excellent example, also of a vari-

ety which produces an abundance of axillary and terminal fruit-buds. The following table, based on a range of average Oregon conditions, will serve to give information concerning the more common varieties of apples and pears:


TABLE I.—RELATION OF POSITION OF BLOOM TO BEARING IN THE COMMONER VARIETIES OF OREGON APPLES AND PEARS.

Variety	Bloom on terminals	Bloom on axillary buds	Annual bearers
Apples			
Arkansas	None	None	No
Baldwin	Some	Some	No
Bellflower	Rarely	Few	No
Ben Davis	Abundant	Many	Yes
Gravenstein ..	Many	Few	Yes
Grimes	Many	Rare	Yes
Hyslop	Many	Many	Yes
Jonathan	Many	Many	Yes
King	Few	Rare	Yes
McIntosh	Few	Few	Yes
Newtown	Some	None	No
Rome	Some	Very few	No
Spitzenberg ..	Few	Rare	No
Transcendent ..	Many	Many	Yes
Wealthy	Many	Many	Yes
Winesap	Many	Many	Yes
Pears			
Anjou	Few	Very few	No
Angouleme	Yes	Yes	Yes
Bartlett	Yes	Yes	Yes
Bosc	Some	Very few	Nearly
Clairgeau	Yes	Yes	Yes
Comice	Few	Few	No
Howell	Yes	Yes	Yes
Winter Nelis ..	Yes	Yes	Yes

In 1914 very few apple growers made any money; most of them did not realize enough to pay the cost of production. In 1915 it is expected that the growers will be able to obtain reasonably good prices, without question. But even so, to make up for the loss last year it will be necessary for the apple growers to make effective every system of efficiency and economy that is possible in harvesting the apple crop.

Chelan, Washington, shipped the first carload of apples June 11th, consisting of Gravensteins, Red Astrachans and Red Junes.

MYERS SPRAY PUMPS



Thousands of fruit growers have become Fall Spraying Enthusiasts, for they find that fall sprayed trees are healthy and free from scale and similar diseases, and require but little attention the following spring.

You are going to spray this Fall and will be interested in the MYERS HANDY PORTABLE Outfit shown below—an excellent general purpose sprayer of medium capacity complete with tank, trucks and fittings ready for business; also serviceable for painting, whitewashing or disinfecting. It is but one of many modern Myers Outfits—Bucket, Barrel and Power, that bring success to fruit growing of all kinds.

The complete line of Myers Spray Pumps, Nozzles, Hose and Accessories is shown in our 64 page Spray Pump Catalog. Write for a copy today. Its free to anyone interested in Spraying.

F.E. MYERS & BRO.
ASHLAND PUMP AND HAY TOOL WORKS
120 ORANGE ST. ASHLAND, OHIO.

Beats the band how quick Prince Albert rings true!

Soon as you get a light you'll start enjoying every puff of a pipe or makin's cigarette that's packed with Prince Albert! *Don't* have to be introduced; *don't* have to fireproof your tongue; *don't* have to do any old thing but hike to the shade-side of the barn and hum and smoke-smoke-smoke! The patented process makes all this possible—and cuts out bite and parch.

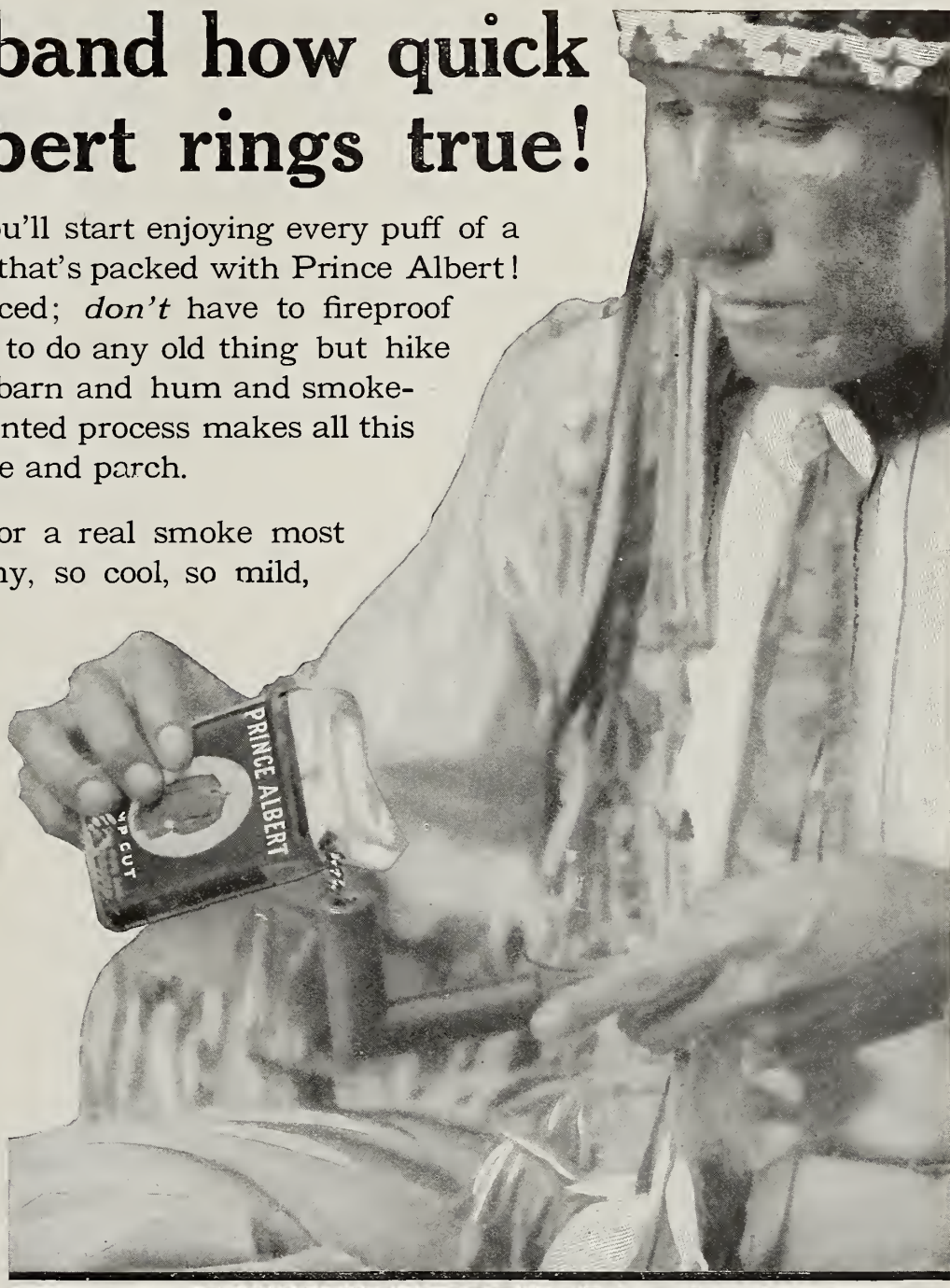
It cheers up your desire for a real smoke most astonishingly—so chummy, so cool, so mild, is every fragrant puff of

PRINCE ALBERT

*the national
joy smoke*

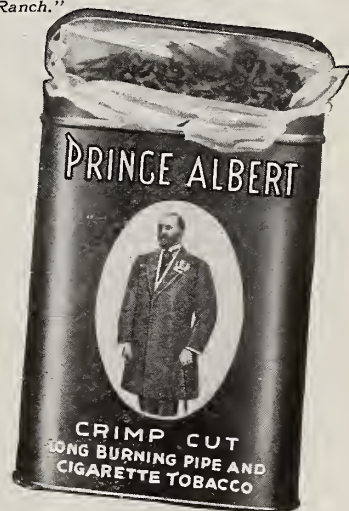
You take our word for it and fire up your best Sunday jimmy pipe with a load, or roll up a cigarette. Let P. A. sing its sunny smoke song in the language *your tongue* and *your palate* will know right quick! Give it a real try-out, and there'll be no doubt about Prince Albert being your side partner in the immediate future! Smokers all over the nation, all over the world, *now*, know how good this brand is; how much actual joy it passes out. Realize that it can't cost you more than 5c or 10c to *prove* that Prince Albert is all the most ardent enthusiast ever claimed for it.

Prince Albert is sold everywhere in toppy red bags, 5c; tidy red tins, 10c; handsome pound and half-pound tin humidors; and in pound crystal-glass humidors with sponge-moistener tops that keep the tobacco in the finest possible condition.



Here is a photograph of one of the finest types of Indians now living, Chief Eagle Shirt, an ardent pipe smoker, who hails from the Pine Ridge Reservation. The Chief is 32 years old, and is one of the star attractions with "101 Ranch."

Copyright 1915 by R. J. Reynolds Tobacco Co.



R. J. REYNOLDS TOBACCO CO., Winston-Salem, N. C.

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

The Apple as a Farm Product—History and Present Status

By A. Millard, Jr., Hood River, Oregon.

MARKETS, "local" and "unclassified," are then pretty well out of the question, except for locally-produced fruit, and for anything like distance shipment, the grower must turn to the primary market. The largest primary markets for apples in about the order of their importance may be listed as: New York, Boston, Philadelphia, Chicago, Cincinnati, Baltimore, St. Louis, Pittsburg, San Francisco, New Orleans and Seattle. We will leave the question of domestic markets here and proceed to take up in some detail the foreign markets. The writer realizes that more than proportionate emphasis is laid below on foreign markets. However, the subject is most interesting to all fruitgrowers and dealers, and is especially vital to the growers of the Far West, and since their grades of fruit are more in demand abroad than the general grades of Eastern fruit, the Western growers will do well to follow up this matter very vigorously.

About 7 per cent of the United States apple crop is marketed overseas each year, and this fruit tends strongly to be the best class of fruit and to be more uniformly and safely packed. This preference has favored the strictly graded Northwest boxed apple, but the handicap of the transcontinental freight rate to the Atlantic seaboard for European shipment has largely offset this. Foreign markets seem to prefer the boxed fruit, but barreled apples are generally delivered, per bushel, cheaper (barrel equals three bushels). In England, always the chief foreign market for apples, there has been built up by many years of custom the liking for barreled apples of certain varieties, notably the Baldwin; this is a distinct advantage to Eastern barreled fruit. There are many difficulties attendant on foreign shipments of apples, as there are in any foreign trade, and de-

velopment of foreign markets must proceed very slowly, since transportation, refrigeration, storage, and most important, trade relation facilities, can only be built up in time. Our Yankee methods run into many stumbling blocks as soon as we get away from our own shores, and conservatism is the only successful practice when dealers over the seas are to handle our output.

The markets outside of the United States are briefly considered country by country below. (Much of the text and all of the tables not otherwise specified on the subject of foreign markets here are from R. M. Rutledge, "Better Fruit," Vol. IX, No. 1, and from S. S. Lamb's article based on consular reports published in "Better Fruit" May, 1914.)

Great Britain should be mentioned first. This was our earliest and has always been our largest market. Liverpool, London and Glasgow have always taken most of our exports of apples. England imports large quantities of apples from the United States and Canada as well as from other countries. Their relative importance is shown by the following approximate percentages:

TABLE XV.—ENGLISH IMPORTS OF APPLES.

Country	1911	1912
United States	44%	43%
Australia	9%	10.5%
Belgium	0.8%	1.3%
Canada	41%	42.7%
France	1.6%	0.4%
Portugal	2.6%	2%
All others	1%	0.6%
	100%	100%

Total imports in cwt. 3,332,618 3,881,946

Distribution by the importing fruit brokers is either by private sale or by auction. When large quantities are to be dealt with, the latter method is most general, but where the supply is short, private sales are frequently better. Brokers prefer to be in a position to adopt either method according to their judgment of market conditions at the time. The 1912-13 American exports to Liverpool were 35% of total United States export barreled apples and 22% boxed apples; London 19% barreled and 38% boxed; Glasgow 18% barreled and 7% boxed. Of the boxed apples taken into Great Britain, Washington supplies about 60% and Oregon and California each about 20%. Appendix tables give exact export figures, etc. England is a large but a very close market for all fruits. There are some strong variety preferences; the Elberta peach, for instance, is practically the only peach marketed in London. The writer has been told by M. W. French, apple exporter of New York City, that at a fair price the English market for Baldwins was unlimited, but that the market for any other variety went "all to pieces" as soon as any above normal shipments were made. The heavy expense of placing apples on the English market is rather discouraging; the Panama Canal should materially aid

the Western grower. In 1912-13 best quality Yellow Newtowns brought \$1.22 to \$1.94 per half box; the red apples \$1.09 to \$1.94; "choice" boxed apples brought from \$2.18 to \$4.86 per box. Australian Spitzenbergs, in the opposite season, brought about \$1.65 per forty-pound box. Newtown "104s" to "144s" are the preference Western apple. Gravensteins and Jonathans have been mentioned as well liked early apples; Spitzenberg, Staymen, Winesap and Rome Beauties as late varieties, and Ben Davis and Blacks as very late varieties from the West, which are specially desired. Some apples are raised in England, but the climate is unfavorable; they are generally of a very poor quality, and as competitors they are negligible.

Germany imports large amounts of apples, chiefly from the United States and Australia. In 1912-13, 300,000 boxes and 230,000 barrels were handled at Hamburg, the barrels coming from Eastern States and Canada, and the boxes chiefly from Washington and Oregon. Hamburg is the distributing center for all Germany. In 1912, what were called low prices prevailed, with three times the usual shipments of apples, the prices per wholesale box ranged from \$1.66 to \$2.14.

Apples are the only United States fruit sold in France, and practically all these come from the Northwest. After a bad local season, there is a good market for apples. They sell, retail, on Paris fruit stands for from five to eight cents apiece. The French market depends entirely upon the local production of fruit and for this reason is so unsteady from year to year that shipping apples to France steadily is something of a speculation.

Belgium's imports of apples are considerable, through Antwerp by way of London and Southampton. The market is controlled by London, and only the best quality apples sell, local pro-

Water A-Plenty
for stock, home, fire protection,
etc.—fully discussed in our book,
"Water Supply for the Country Home"

It describes our 300 guaranteed,
durable pumps—hand and power
—\$3 to \$300—which our
Service Dept. will help you
select—free. Send for
your free copy today.

The Goulds Mfg. Co.
Seneca Falls, N. Y.

BRANCHES:
New York
Houston
Chicago
Atlanta
Boston

**GOULDS
RELIABLE
PUMPS**

Fruit Burdened Branches
are not injured if you have the
proper equipment. An illustration
on page 6 shows how
this is done.

Experienced Horticulturist Wants a Position

31 years old; German by birth; graduate of horticulture in Germany. Years of experience in some of the finest orchards in the Northwest. — C. R. VILLMANN, Horticulturist, Walla Walla, Wash.

WANTED Position as Foreman or Manager of a fruit or diversified ranch by a single man, 30 years old, with 6 years' experience in Wenatchee Valley. Am familiar with the care and developing of an orchard and can deliver the goods. Address S. Y., care of "Better Fruit."

Wanted Working foreman on 50-acre apple and stock ranch. Must understand pruning, spraying and packing, also knowledge of general farming. House, milk and garden furnished. State age, experience and wages expected in first letter. Address H. A., care "Better Fruit."

duction taking care of the poorer grades. The United States ships a good proportion of the apples consumed. Canada and South Africa also supply some. This market is characterized by irregular shipments and fluctuates badly. Denmark, Norway and Russia buy our fruit. One million pounds of apples and pears were exported from this country to Norway in 1910. American apples brought in this year \$4.86 to \$6.07 per wholesale barrel, in Stavanger, but shipment to the markets of all three of these countries is very expensive, since it includes repacking, or at least reloading at English ports. There are some home-grown red apples in Denmark, but American apples are imported through Hamburg and the English cities, to Denmark.

In Russia there seems to be no chance for increased sales. Very little fruit is eaten and the country is measurably self-supplying. Conditions in The Netherlands are similar to those in Belgium, and though there are excessively high import freight rates at Rotterdam, a few American apples find their way to that country. This completes the survey of the countries shipped to via the English Channel.

In past years Austria-Hungary has paid very high prices for a limited amount of the best fruit; well-to-do classes have purchased American fruit out of the fresh-fruit season in that country. Hothouse out-of-season Australian fruit shipped in 55-lb. wooden packages has brought excessively high prices there.

There is, generally speaking, no market for American fresh fruit in any of the Mediterranean countries. These countries produce such an enormous amount of fresh fruit at prices with which it is impossible to compete that there appears to be no opportunity for American fruit interests in that region.

In the Northwest, Asia is generally thought of as a big market for apples, but as a matter of fact only small quantities of first-class stock is demanded. Only the most wealthy classes of natives in these densely populated coun-



SPEED YOUR SALES

Our Apple and Case Labels will make your pack more attractive to the buyer's eye.

It's the best looking package that sells first and usually brings the fancy price.

Our experts on fruit packing will advise you free of charge.

WRITE NEAREST OFFICE

Schmidt Lithograph Co.

SAN FRANCISCO

Los Angeles Fresno Portland Seattle Salt Lake City

tries can purchase American apples, and these few, with the small foreign colonies in the larger cities, make up the market. Hongkong imported 11,000 boxes of apples from all countries in 1912-13, and of these 2,000 boxes came from Hood River by way of Seattle, and 6,000 were second and third-class apples from San Francisco. Certain Western growers can supply this market to advantage, but it is a question of individual business relations and not at all a normal market.

Australia imports dried fruit and exports fresh fruit. They are strong competitors of our apples, though they are always marketed in the opposite season. The following figures and tables are from the "Official Year Book of the Commonwealth of Australia" (Boston public library). 47,749 acres of fruit were planted in Australia in the last ten years. The main increase in Tasmania (16,383) and Western Australia (12,118) is due to the extensive plantings of apple trees with a view to the London market for fresh fruit.

TABLE XVI.—TOTAL ACRES ORCHARDS AND FRUIT GARDENS AND ACRES PER ONE THOUSAND POPULATION FOR AUSTRALIA.

Years	Acres	Population 1000
1901-1902.....	146,775	38
1907-1908.....	169,299	41
1908-1909.....	171,558	41
1909-1910.....	178,798	41
1910-1911.....	185,156	42
1911-1912.....	194,524	43

Note—Australian fruit ranges from the tropic pineapple and mango to the temperate apple, strawberry and gooseberry.

Australian fresh-fruit imports consists chiefly of bananas from Fiji; oranges and lemons from Italy, and out-of-season apples from Canada. Their 1911 fresh-fruit exports amounted to £420,780 (£594 of this was re-exported). This fruit was chiefly apples, and they were sent to the United Kingdom, Germany, New Zealand, Brazil,

U. S. A. and India. The following table gives an idea of the fruit trade of the commonwealth:

TABLE XVII.—AUSTRALIA'S NET IMPORTS OF DRIED FRUIT AND NET EXPORTS OF FRESH FRUIT.

NET IMPORTS OF DRIED FRUIT		
Year	Quantity, Pounds	Value
1901.....	13,433,735	£165,099
1907.....	8,000,000	57,864
1908.....	8,000,000	64,159
1909.....	12,000,000	108,046
1910.....	9,000,000	74,311
1911.....	5,000,000	45,042

NET EXPORTS OF FRESH FRUIT		
Year	Quantity, Centsals	Value
1901.....	.....	£41,031
1907.....	246,482	17,594
1908.....	211,585	19,257
1909.....	121,997	18,168
1910.....	326,928	19,513
1911.....	313,088	12,592

Of preserved fruit in 1911 Australia imported £67,620 worth and exported £29,245.

The following figures and quotations from the 1913 New Zealand Official Year Book are of interest, more as production figures of a competing country than as applying to a prospective foreign market: "Each succeeding year shows a marked increase in area planted to commercial orchards in the Dominion." For the four years ending December, 1912, 7,413 acres were planted, and 2,420 acres were estimated

FRUIT GROWERS Dehydrate Your By-Products

It gives you a high grade quick selling product at a minimum cost. It makes a clean and natural tasting product. Dehydrated fruits and vegetables have been approved by the U. S. Government, while desiccated, dried and evaporated products have been rejected. There is hut one Dehydrator manufactured in the West and it is the best By-Product machine ever devised. It is adapted to the individual grower, as it can be constructed to meet any and all requirements. It is fully covered by U. S. patents. Therefore, you are protected in its use.

The manufacturers of this Dehydrator have recently patented new and improved automatic labor-saving preparatory machinery which will further reduce the present low cost for the production of this product.

For new descriptive booklet address

LUTHER MANUFACTURING CO.
San Francisco, California

Western Pine Box Sales Co.

HIGH GRADE FRUIT BOXES
APPLE, PEAR AND PEACH BOXES
Fruit and Vegetable Crates
GOOD SERVICE—Write us
SPOKANE, WASH.

Store Apples

NEAR BIG MARKET

Apples stored with us take in transit rate and quick delivery to

**New York, Boston
Philadelphia**
and other big eastern markets.

LOCKPORT COAL, ICE & COLD STORAGE CO.
Lockport, New York

WE WILL SAVE YOU MONEY ON YOUR

Fruit Case Labels

Quality Guaranteed.

Write for Prices and Samples.

THE SIMPSON & DOELLER CO.

E. SHELLEY MORGAN, Northwestern Manager

1423-24 Northwestern Bank Building

PORTLAND, OREGON

We have a fine line of new stock Apple Box Labels. Samples on application.

for 1913; the total 1913 area would then be 38,720, as compared to 31,953 for 1910-11. "A good market exists locally for choice, clean fruit, but as large areas recently planted come into bearing, growers will have to look to outside markets to take the surplus, and it is hoped that the export of fruit will become in time one of the largest of the Dominion." 33,000 cases of apples were shipped to South America in 1913, and "this market will be able to absorb all the Dominion can supply for several years to come at satisfactory prices to the growers."

The exports of Canada to the United Kingdom were as follows:

TABLE XVIII.—CANADIAN EXPORTS OF DRIED AND FRESH APPLES.

	Fresh Apples	Dried Apples
1908.....	\$4,422,722.00	\$11,687.00
1909.....	2,692,233.00	41,269.00
1910.....	4,184,878.00	86,084.00
1911.....	1,598,359.00	16,013.00

Canada imported no green apples, and practically no dried apples (\$48) in 1912, while she imported \$226,239 worth of oranges, lemons, limes, etc.

Our apple trade, with our sister continent, has been very undeveloped. Now, however, due to the increasing prosperity of South America, exportations of American apples are finding their way into that market. At present the industry is only in its infancy, but it is hoped that the solidity of the American apple will enable it to travel long distances and to hold its own against

all comers. Argentina, Brazil and Uruguay all have small importations of our apples, but due to the fact that refrigeration facilities are very inadequate on the few transportation lines between our ports and those of South America, these have been very limited in quantity and very costly when landed in trans-equator ports. American apples are unknown in Chili, as well as in many parts of the west coast, but with the advent of the Panama Canal this will probably be remedied. Venezuela imports some of our apples from the Northwest, but it is only at great cost incurred by shipping over the Isthmus; these are North Pacific apples. Mexico started some importation of our apples some years ago when refrigerator cars could be sent to Mexico City, but due to the unsettled condition of the country and the impossibility of maintaining rapid transportation, this has ceased. The South American markets can never rival England or Germany as an outlet for apples from this country in quantity, but trade south of the equator promises more proportionately to the apple industry than does any other market in sight. This applies especially to best quality North Pacific stock.

The foreign market question is an involved one at best, and with war aftermath conditions in Europe we cannot tell what exports can be counted upon. France is said to have recovered very rapidly in a commercial way after the disastrous war of 1870, and apples sold in Europe are always sold to the wealthier class, who will be least embarrassed after the war.

If there is one place more than any other where business ability in apple marketing will count, it will be in the disposition of apples over the seas.

The man who would know how to sell his apples must first study and understand some of the fundamental principles in the exchange of farm products. Apples are not sold today in the same manner as they were sold a hundred years ago. It is not necessary to know how apples were sold then in order to know how they are sold today; that subject can be more quickly studied by itself; but it is necessary to understand the history of the trade in apples in order to judge how they will be sold tomorrow. There is no question

in the whole subject of commerce and trade that is more distinctly in a developing stage than of the distribution of farm products. Unsettled phases of this distribution are working out their destiny, and the man unaware of this evolution can hardly avoid being left behind in the race. The subject of the distribution of farm products needs no advertising to make it a pertinent question—it is a popular issue already—it is a cry of the day. This means that biased and baseless opinions and criticisms will be expressed, but it also means that a solution of the problems will be hastened by publicity.

The man who would sell his apples intelligently must know the lessons the past has taught, and must view the present question with a broader perspective than petty, individual or even community problems. He cannot afford to implicitly accept the conclusions of others; these matters are too undefined to allow of settlement by any one opinion. He must realize that there is an excess of apple plantings in America, but he must not stop here, for he would then be no better off than if he firmly believed that there were an insufficient supply of trees. He must follow the matter out. How will these large crops to come affect him, and through what agencies, and what may he do to place himself in the most advantageous position to meet the necessary competition. The man who would market apples must know who eats his fruit and how much is paid for it, and what other

The Mattress WITH EVERY ADVANTAGE

Heywood Mattresses

are more than ordinary mattresses.

Each Heywood Mattress comes separately wrapped. It has not been handled—it has never been out on trial.

It is absolutely guaranteed to give satisfaction or you receive a new mattress.

Priced Reasonably At
\$12.00, \$15.00 and \$18.00

Made By
**HEYWOOD BROTHERS AND
WAKEFIELD COMPANY**
Portland and Seattle

Sold By
All Best Dealers

Adobe Lands

as well as sandy soil are easily cultivated. On page 6 an illustration shows how this is done.

HOOD RIVER APPLE VINEGAR CO.

HOOD RIVER

**YELLOW NEWTON VINEGAR
AND SWEET CIDER
EVAPORATED APPLES**

Made from Choice Hood River Apples

If your jobber cannot supply you
send your order to

Hood River Apple Vinegar Co.

HOOD RIVER, OREGON

fruit is offered to those who are to select his apples and at what price. He must decide whether he should sell his own crops or sell through associations, and he must know where he may most advantageously dispose of his fruit.

Such preparation is not easily obtained, hence the weeding out will take place rapidly; but the man who is thus armed for this competition can hardly fail to succeed.

Newspaper reports indicate that the apple growers of New York State, realizing the apple crop is short this year, at the present time are very firm in their ideas of prices. It is stated that New York growers, believing the crop to be one-half of last year, think apples should sell for twice the money sold at in 1914. Those who sold at \$1.25 are asking \$2.50 per barrel this year. There are many who are holding for \$3.00 per barrel for Standard Baldwins. Very few sales have been reported up to the present time. Dealers operating in New York State intimate that the price from \$2.00 to \$2.50 ought to be the limit for this year's crop. Dealers believe that by starting the crop off at a moderate price consumption will be stimulated at the beginning, the demand kept up throughout the season and a better average price obtained.

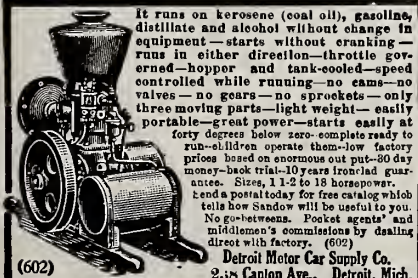
Mr. J. A. Westerlund, member of the Board of Control from Southern Oregon, attended the meeting of the Northwest Fruit Growers' Council in August, where he also met Mr. Brand and members of the Federal Trade Commission, composed of Jos. E. Davies of Wisconsin, chairman; Edward Hurley of Illinois, vice-chairman, and the following other commissioners: Wm. J. Harris of Georgia, Will H. Parry of Washington and George Rublee of New Hampshire. The Federal Trade Commission is making an extensive tour of the United States to ascertain just what trade conditions are and for the purpose of seeing what can be done to improve business conditions.

Boutell Apple Paring Machinery

Dayton Hardware & Machinery Co.
PORTLAND, OREGON

Write for Catalogue

20 Reasons Why You Should Investigate the SANDOW Kerosene Stationary ENGINE



It runs on kerosene (coal oil), gasoline, distillate and alcohol without change in equipment—starts without cranking—runs in either direction—throttle governed—hopper and tank-cooled—speed controlled while running—no cams—no valves—no gears—no sprockets—only three moving parts—light weight—easily portable—great power—starts easily at forty degrees below zero—complete ready to run—children operate them—low factory prices based on enormous output—30 day money-back trial—10 years ironclad guarantee. Sizes, 1 1/2 to 15 horsepower. Send a postal today for free catalog which tells how Sandow will be useful to you. No go-betweens. Pocket agents' and millmen's commissions by dealing direct with factory. (602)

Detroit Motor Car Supply Co.
235 Canton Ave., Detroit, Mich.

Fall Sowing

Tested Seeds—

Grasses, Clovers, Alfalfa

Vetches, Grain and

Special Mixtures for

Special Purposes

Write for Prices and Samples. Get the Best—Don't Take Chances on Inferior Seed. Dealers Sell Lilly's Seeds.

THE CHAS. H. LILLY CO., Seattle



The European apple market appears to be a very uncertain proposition for export this year on account of the war, the submarines and the blockades. Nevertheless the same conditions prevailed to some extent last year with a large export business being done, and larger in 1914 than in 1913, but it must be borne in mind that the submarines are more active, while the blockades are becoming more effective, with England endeavoring to prevent as much as possible shipments of many kinds going through the neutral countries into the countries at war with England and her allies.

A local representatives of an Eastern dealer is reported as having stated that the following is a list of apple prices that, in his opinion, can be expected to prevail at the beginning of the apple season: Arkansas Black, extra fancy, \$1.50, fancy \$1.30; Black Bens, \$1.25, \$1.05; Delicious, \$1.90, \$1.75; Jonathans, \$1.35, \$1.20; Yellow Newtowns, \$1.60, \$1.45; W. W. Pearmain, \$1.30, \$1.15; Rome Beauty, \$1.60, \$1.45; Spitzenberg, \$1.85, \$1.70; Stayman, \$1.40, \$1.25; Winesap, \$1.60, \$1.45; Ben Davis, \$1.06, 90 cents; Black Twigs, \$1.10, 90 cents; Grimes Golden, \$1.25, \$1.15; Bananas, \$2.25, \$2.10.

A shipment of Bartlett pears was condemned at Vancouver, B. C., on account of codling moth. A similar experience occurred last year. Therefore it seems wise to caution all fruit-shipping concerns to use extreme care in shipping to Canadian ports.

One apple grower of Wenatchee is reported as having sold his apple crop of Extra Fancy and Fancy, all sizes, as allowed in the Northwestern grading rules, at \$1.40 per box.

In the Hood River Valley there is the Apple Growers' Association organized in 1903, which will handle from two-thirds to three-quarters of the crop, the Northwestern Fruit Exchange, the Hood River Apple and Cold Storage Co. and a few independents.

The U. S. government reports 205,000,000 bushels of apples this year. Their report for last year indicated 253,000,000 bushels. The State of Washington is credited with 31,000,000 bushels.

Ridpath's History of the World At A Bargain



Nine Royal Volumes—4,000 Pages—2,000 Pictures
We will name our price only in direct letters to those sending us the Coupon below. Tear off the Coupon, write name and address plainly, and mail to us now before you forget it. Dr. Ridpath is dead, his work is done, but his widow derives her support from his history, and to print our price broadcast for the sake of quickly selling these few sets would cause great injury to future sales. Mail coupon for free sample pages.

INSPECTION COUPON

WESTERN NEWSPAPER ASSOCIATION 10-15
Better Fruit Bureau, Hood River, Oregon

Please mail your 46-page free sample booklet of Ridpath's History of the World, containing photographs of Napoleon, Queen Elizabeth, Socrates, Caesar and Shakespeare, and write me full particulars of your special offer to "Better Fruit" readers.

NAME

ADDRESS

BETTER FRUIT

HOOD RIVER, OREGON

Official Organ of The Northwest Fruit Growers' Association
A Monthly Illustrated Magazine Published in the
Interest of Modern Fruit Growing and Marketing
All Communications Should Be Addressed and Remittances
Made Payable to

Better Fruit Publishing Company

E. H. SHEPARD, Editor and Publisher

STATE ASSOCIATE EDITORS

OREGON

C. I. Lewis, Horticulturist.....Corvallis
H. S. Jackson, Pathologist.....Corvallis
H. F. Wilson, Entomologist.....Corvallis

WASHINGTON

Dr. A. L. Melander, Entomologist.....Pullman
O. M. Morris, Horticulturist.....Pullman

COLORADO

C. P. Gillette, Director and Entomologist.....Fort Collins
E. B. House, Chief of Department of Civil and Irrigation
Engineering, State Agricultural College.....Fort Collins
E. P. Taylor, Horticulturist.....Grand Junction

IDAHO

W. H. Wicks, Horticulturist.....Moscow
W. S. Thornber, Horticulturist.....Lewiston

UTAH

Dr. E. D. Ball, Director and Entomologist.....Logan

MONTANA

O. B. Whipple, Horticulturist.....Bozeman

CALIFORNIA

C. W. Woodworth, Entomologist.....Berkeley
W. H. Volck, Entomologist.....Watsonville
Leon D. Batchelor, Horticulturist.....Riverside

BRITISH COLUMBIA

R. M. Winslow, Provincial Horticulturist.....Victoria

SUBSCRIPTION PRICE:

In the United States, \$1.00 per year in advance
Canada and foreign, including postage, \$1.50

ADVERTISING RATES ON APPLICATION

Entered as second-class matter December 27, 1906, at the
Postoffice at Hood River, Oregon, under Act
of Congress of March 3, 1879.

The Second Manufacturers' and Land Products Show will be held in Portland October 25 to November 13. An unusually attractive program is offered this year, with special features for every day. This show is of special interest to the Northwest for the reason that the exhibits cover all the products of the soil and include all kinds of manufactured goods which are made in the Northwest. It is a splendid opportunity for all manufacturers to exhibit their manufactures and secure a great deal of publicity, and help secure additional business. It affords a splendid opportunity for the farmers to exhibit all products of the soil, which will certainly do much to encourage people to locate in the Northwest and help build up our agricultural communities where there is much land yet to be placed under cultivation, and which can be obtained at very reasonable prices. The managers of the Manufacturers' and Land Products Show show excellent judgment in making this a diversity show, because the future prosperity of the Northwest depends not upon the producing of one crop alone, but a large number of crops; in other words, "diversity farming."

The Northwest Apple Crop for 1915. While a great many estimators placed the apple crop of the Northwest at 12,000 cars, the Editor of "Better Fruit" early in the season estimated the crop around 9,000 cars. (At the time the Editor furnished this estimate he stated many things might arise between that time and harvesting to reduce the crop below that figure, more of which has happened than could reasonably be expected.) Since this estimate was made considerable damage has resulted in various districts from the following

causes: Hailstorms, codling moth, fungus, drouth, lack of water on the part of some of the irrigation companies,—all of which has changed conditions very much in the last thirty to sixty days. The consensus of opinion now seems to point to a much smaller yield than originally estimated. Consequently it looks very much as if the commercial crop would be as follows: Washington, about 4,500 cars; Oregon, about 1,500 cars; Idaho, 500 to 700 cars. There will be a reasonable proportion of Extra Fancies, but not as large in some districts as was anticipated early in the season, while in other districts the quantity of Extra Fancies will be larger than originally estimated.

Fall Spraying for Anthracnose.—Anthracnose is one of the most serious diseases that can infest an orchard, for the reason that when the trees become badly infested the large limbs die, and in a young orchard when the canker attacks the trunk of the tree the fruit grower may lose the whole tree. Recommendations for anthracnose is a fall spraying of bordeaux mixture. Of course the earlier this spray is applied in the fall the better. However, when there is a crop of apples on the trees the grower cannot use bordeaux strong enough to be absolutely effective in controlling anthracnose, therefore it is necessary to spray with bordeaux mixture, winter strength. This should be done immediately after the apples are harvested. Where anthracnose is more or less prevalent in an orchard it is recommended by pathologists that bordeaux of summer strength should be applied to the trees before the fall rains start in, which can be done without injury to the fruit. Every grower who has an orchard infested with anthracnose should spray this fall with bordeaux immediately after the harvesting season.

The United States Department of Labor has sent Inspector R. P. Bonham to Hood River to assist the fruit growers in securing help during the harvesting season. Splendid work was rendered this valley by the United States Department of Labor during the strawberry season. Mr. Bonham's work during the apple harvesting season is to assist growers to secure the necessary amount of competent help. The United States Department of Labor, Immigration Service, maintains an office in Portland, 424 Railway Exchange Building.

The Eighth National Apple Show will be held in Spokane November 15 to 20. Everyone who has attended the National Apple Shows at Spokane realizes fully their importance and value to the fruit industry of the Northwest. The people of Spokane are showing great enterprise in programming this show this year, especially so because it has been difficult to finance anything on account of the tightness of the money market. One of the main features of the show will be the meeting of the

Washington State Horticultural Society, which will hold its sessions in Spokane during the week of the Apple Show, under date of November 18 and 19. "Next Year's Marketing Problem" is one of the vital subjects that will come up before the growers who attend the Apple Show this year. Every fruit grower who can send an exhibit to this show should do so, and every fruit grower should attend. The National Apple Show has always been good and is entitled to the support of every fruit grower of the Northwest.

Marketing the 1915 Apple Crop.—The experience in marketing apples in past seasons, especially in 1914, when the crop was rushed on the market in bulk at harvesting season, realizing the lowest prices that have been obtained for box apples in many years, ought to be a good lesson to apple growers for 1915 and future years, indicating the necessity and importance of avoiding glutting the market at any particular time, especially in harvesting season. The supply of apples should go to the consuming public regularly month by month in ample quantities, without overcrowding the market during any of the marketing months. Of course this means that a great many apples should be placed in cold storage, and it is well in using cold storage to distribute the crop so that the supply is within close distance of the large consuming centers and tributary territory.

Fall Spraying.—Generally throughout the Northwest orchards have been pretty free from San Jose scale, consequently growers have not been spraying for San Jose scale in the last year or two, therefore San Jose scale has increased very considerably in various fruit districts throughout the Northwest recently. In some cases the scale is reported as being very plentiful. Growers are beginning to realize this, but a word of advice seems well worth while to those who may not be aware how serious this pest is if allowed to continue, as San Jose scale breeds very rapidly and only a small number this season may mean a seriously infested orchard next year. Therefore it is advisable to suggest that where scale is present in the orchard the fruit grower should spray either this fall or next spring. Of course if a man has comparatively little scale he can get along with one spray.

A New Grafting Wax.—Mr. August Niehans, after a long period of experimental work, has succeeded in making a grafting wax which is being reported on favorably by growers who have used it, especially on account of its convenience, as every fruit grower knows all grafting wax generally has to be heated and kept warm when being used. Mr. Niehans is making a pliable grafting wax that can be applied without being heated. Therefore it will be found to be a great convenience to the fruit grower who has grafting to do or who wants to cover the wounds after he has



Best of the Trip in Daylight
between

Portland and San Francisco

Exposition at its best.
October the Farmers' Month.
Daily Excursion Fares via

"THE NORTH BANK ROAD"

and the palatial SS

"Great Northern"

AND

"Northern Pacific"

EVERY

TUESDAY, THURSDAY, SATURDAY

\$30 Round Trip
from Portland

\$33.40 Round Trip
from White Salmon

Leave Portland 9:30 A.M., arrive San
Francisco 3:30 P.M. next day.

E. A. GIBERT, Agent S. P. & S. Ry.
White Salmon

R. H. CROZIER, A. G. P. A.
Portland.

Manufacturers' & Land Products Show
Portland, Oct. 25 - Nov. 13

done a severe pruning, to protect them from the weather. Attention is called to this wax on account of its convenient form, being ready for use at any time, which will save the fruit grower much trouble. Full particulars can be obtained by writing Mr. August Niehans, of Hood River, Oregon.

National Apple Day.—October 19th is National Apple Day. Every grower, every dealer, every retailer and everyone connected with the apple business should get behind this day to make it a grand success. It comes just as the right time of year when if the right effort is made a prompt stimulation can be created for apples which will mean increased consumption of apples during the year, and increased consumption of apples will mean a better demand and better prices, thus helping all the growers. On the other hand, the more fruit

we eat, and the more regularly we at it, the better health we will have. So anything you can do to boom National Apple Day will be a help to everybody.

Distribution of Northwestern Box Apples.—The Office of Markets and Rural Organization has perfected arrangements for investigation and study of distribution of Northwestern box apples. An office was opened in Spokane September 23 in charge of Mr. J. C. Gilbert. The excellent work being done in the distribution of fruits by the Office of Markets and Rural Organization will be of wonderful benefit to the fruit growers of the Northwest.

Treat the Boys—Now's Your Chance

National Apple Day occurs Tuesday, October 19, and is now a permanent institution. It is the day of cheer and all are invited to join in its festivities.

There are many reasons why National Apple Day should be encouraged. First of all, apples are a valuable commercial commodity and aid towards the nation's wealth, when they are grown and distributed scientifically. Second, their health value is unquestioned. Even with the knock given the doctor by the old-time slogan, "An apple a day keeps the doctor away," the doctor has many good words to say of the medicinal value of the apple. The modern slogan, "Health's best way, eat apples every day," is a more pleasing truth. The phosphorus in the apple is considered a great aid to brain workers, particularly if apples are eaten on retiring at night. From an economical standpoint a box or a barrel of nice juicy apples will satisfy and please more persons than any other article of food or luxury with which you can entertain them. From the humblest of humanity to the millionaire, king or queen, the apple will be accepted from the barrel or box without the use of a golden or silver platter, and such is the dignity of the apple, "King of Fruits."

So many good things can be said of the virtues of the apple, why not keep a nice box of apples near your desk, and your cigar bill will be less? Even the other fellow who is accustomed to the use of strong drink will change, when weaned to the liberal use of apples. Prohibitionist and temperance organizations should emblazon on their temperance banners, "Don't drink, pray; eat apples every day."

Accordingly you see apples are also a moral force. I might call them "The sunshine fruit of cheer." The smiling school children are aided in health by apples—but do they get their share? The man or men who supply their neighborhood schools with apples on National Apple Day will be blessed and revered with the joy of giving and the pleasure that is experienced by making so many others happy. Won't you help make the day a success by supplying your employes, family, friends, etc.? Nature's best fruit—the sunshine fruit of cheer. Beneficially and respectfully yours, R. J. Coyne, Chairman Publicity Committee.

HERE ARE THE Cut Prices

— ON —

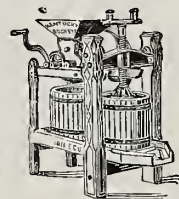
Fruit Ladders

6-ft. Mitchell Tri-Pod Ladder	\$2.40
8-ft. Mitchell Tri-Pod Ladder	3.20
10-ft. Mitchell Tri-Pod Ladder	4.00
12-ft. Mitchell Tri-Pod Ladder	4.80
14-ft. Mitchell Tri-Pod Ladder	5.60

At these prices (for a first-class ladder) you simply cannot afford NOT to send us a money order or check for one of these ladders

— BUY A —

Mitchell-Keystone Cider Mill



and you will get
more for your
money.

Three Sizes
Prices upon request.

Mitchell
LEWIS & STAYER CO

Portland, Ore.
Spokane, Wn.
Boise, Idaho

Arthur M. Geary, whose father, Dr. Geary, owns a large orchard in Southern Oregon, while attending the law school in New York, was a frequent visitor among the fruit dealers of that city. He became impressed with the value of the auction market for apple growers. Since his return to Portland, where he soon expects to take up the practice of law, he has been visiting a number of fruit sections, explaining his views as to the value of auction markets to the apple growers by giving addresses and writing a number of articles which have appeared in various publications.

The Georgia peach section shipped about 1,500 cars of peaches to New York. In 1912 New York used about 2,600 cars of Georgia peaches and in 1914 about 1,600 cars. The Georgia peach crop varies all the way from about 4,000 cars annually to 8,000.



JAMES HANDLEY, QUINCY, ILLINOIS
Founder of National Apple Day

MR. HANDLEY was born in Rhode Island, spending much of his early life in an apple orchard, consisting of Rhode Island Greenings. When a boy he moved to Missouri, living for a few years in the vicinity of St. Joseph, where he continued his interest in orcharding and fruit growing, becoming a member of the local horticultural society. During his school life he devoted much attention to the study of botany, studying the growth of trees, plants and flowers. Afterwards he moved to Montana. While there he learned the printer's trade, becoming associated with the press and doing much work in a publicity way in developing the fruit industry of that state. While in Montana he published a pamphlet on the resources of that state, making prominent the orchard industry. Later he returned East and settled in Quincy, Illinois, his present home, where he assisted in organizing the Mississippi Valley Apple Growers' Association. For fourteen years he has been secretary-treasurer, a great tribute to his ability and sincerity in behalf of the fruit industry of that section. The association came into existence for educational purposes and for the purpose of observing more closely the causes of failures in the production of fruit. Through the efforts of Mr. Handley,

who conducted a very careful campaign of research work, it was determined to a large extent that the poor crops were due to a lack of care and treatment on the part of the owner. Therefore Mr. Handley concluded that it was wise to set apart one day of the year to be observed in giving serious attention to the causes of failure and to other factors that might be introduced for the purpose of arousing a more general and concerted action on the part of the growers, with a view to obtaining better results. Incidentally, confidence was inspired, and the idea was so popular that Mr. Handley conceived a second idea in connection with Apple Day, which was that such a day could be utilized by a feast of apples, in this way stimulating in the beginning of the apple season an increased desire which would lead to a greater consumption, that would be of benefit to the consuming public as well as the grower and everyone connected with the apple industry. The objects and aims of Mr. Handley were entirely original and so interesting, and the opportunity for accomplishing much along this line were so great, that the plans were approved by all of the prominent people connected with horticulture in the United States. The grower, the commission man, the apple dealer, the retailer, the

public, the press, have all worked admirably and forcefully together in harmony along the ideas of National Apple Day as suggested by Mr. Handley, and the results already achieved have far surpassed the most sanguine expectations. The orchard industry has advanced and improved during the last few years and has now become a permanent business, almost a stabilized business. National Apple Day by general agreement has been set for the third Tuesday of every October. In nearly all of the large cities this day is being celebrated throughout the Union with exhibitions of apples in all the leading stores; special inducements to the trade are offered; the day is observed by all the hotels, dining cars, restaurants, who prepare special apple menus for this great day, the greatest day in the whole year for the apple world, and in this way, just in the beginning of the harvesting season, the public is stimulated to a greater consumption, which is being maintained throughout the season. The press is liberal in its publicity work; everyone connected with the apple industry is enthusiastic over Apple Day, therefore all honor is due Mr. Handley for creating and establishing National Apple Day throughout the United States. The consumption of apples has increased far beyond calculations and National Apple Day has fulfilled, is fulfilling and will continue to fulfill its purpose by creating a greater consumption and a greater demand, which means more money for every one connected with the apple industry and better health for everyone, as there is no more wholesome food or diet than an apple.

SAND

An illustration on page 6 shows the best way for orchardists to overcome the difficulties of cultivating this soil.

PORTLAND WHOLESALE NURSERY COMPANY

Rooms 6 & 7, 122½ Grand Ave., Portland, Oregon

Wholesalers of Nursery Stock and Nursery Supplies

A very complete line of

Fruit and Ornamental Trees, Shrubs, Vines, Etc.

SPECIALTIES

Clean Coast Grown Seedlings

Oregon Champion Gooseberries and

Write Now

Perfection Currants

Write Now

J. & H. Goodwin, Ltd. APPLE IMPORTERS

Commercial Sale Room, Deansgate,
Manchester, England.

Floral Street, Covent Garden Market,
London, England.

Fruit Exchange, Victoria Street
Liverpool, England.

Humber Dock Street,
Hull, England.

AMERICAN ADDRESSES:

97 Warren Street, New York, N. Y.
60 State Street, Boston, Mass.

Consignments and Correspondence Solicited

Apples for the Soldiers in the Trenches

Every soldier in the trenches and hospitals in Europe will be given an apple in the near future, if plans now being worked out by a committee of the apple trade throughout the United States are successful. It is proposed to have a vessel take over a big cargo of apples to be distributed free under the auspices of the Red Cross, and efforts will be made to get President Wilson and Secretary of State Lansing to have the several warring governments permit safe passage for portions of the big consignment to the various fronts and hospitals where the fruit can be placed in the hands of the Red Cross for distribution, especially among the sick and wounded.

Apple growers and dealers who are endeavoring to send over the big consignment have learned that many of the fighting men are suffering because of lack of fruit juices, giving rise to scurvy and other disorders. Returning surgeons who have seen service in the European hospitals are said to approve heartily the plan to provide more fruit juices, not only among the wounded but also for the men in the trenches. "We are working on this undertaking purely from humanitarian motives," said one of the committee, who is a leading wholesale apple distributor, today. "It is going to cost a lot of money for the fruit alone, and we shall call upon all the people engaged in the apple industry to contribute a portion of the expense. At first the trade did not take kindly to the plan, as it was feared that vessels could not be found to carry over the apples. Then the idea was conceived of chartering a ship which would take nothing but apples, and we believe that when the purpose is disclosed to foreign governments none will oppose free passage of our ship, for it will go on a mission of charity. Last year they let several cargoes of toys and other similar articles go through to the different countries, and I think these apples ought to be considered in the same light as other gifts which America has donated to the war ridden countries."

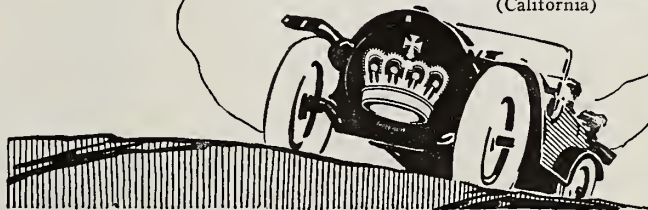
A local apple man who has interested himself in the matter, and who has figured out how it can be done, says: "It is a big proposition and will require skilful handling, but it can be done. The value of the fruit alone would approximate about \$300,000 aboard ship at New York, for apples are worth considerably more than a year ago. Of course the expense of outfitting a vessel is a matter that has not been fully decided upon, but the fruit people have always been charitably disposed in cases like this, and they will help to find the means if assurances are given that the apples will reach the proper hands. We understand that there are about 25,000,000 men actively engaged in the various armies and navies in the European war, and probably as many more indirectly involved. To give them all an American apple apiece would mean at least 50,000,000, and taking 500 apples to the barrel, which would be

Pulls you over the hills

Highest Awards
at San Francisco
and San Diego
Expositions.

Red Crown the Gasoline of Quality

Standard Oil Company
(California)

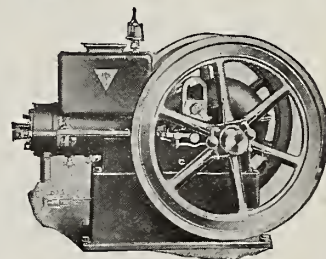


The DE LAVAL LINE

THE LEADER OF THEM ALL

The "ALPHA" ENGINE for gasoline or distillate has its place on every dairy farm or orchard, for pumping water, running cream separators, grinding feed, or any other work generally done by hand.

The ALPHA starts direct from magneto without spinning. No batteries to get out of order, and it is a DE LAVAL product.



Alpha Combination Power Spray Outfits



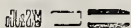
Equipped with a Duplex Vertical Cylinder Double Acting Pump, Direct connected to a 2½ H.P. self-contained ALPHA ENGINE, on an all-steel frame and platform ready to be mounted on wagon trucks. A THOROUGHLY DEPENDABLE OUTFIT.

Write today for catalogue pertaining to our
Silo, Cream Separator, Engine or Barn Equipment.

DE LAVAL DAIRY SUPPLY COMPANY

SAN FRANCISCO, CALIFORNIA, 101 Drumm Street
SEATTLE, WASHINGTON, 1016 Western Avenue

Oregon Nursery Company



ORENCO, OREGON

Extensive growers of all lines of Fruit, Nut and Shade Trees, Evergreens, Flowering Shrubs, Vines, Roses, etc. Introducers of the VROOMAN FRANQUETTE walnut, recognized as the best walnut. Our large complete stock consists of varieties suitable for every kind of climate.

Write us about your wants before buying.

Fruit Trees Need Nourishment

To attain quick and sturdy growth, they must be planted in soil that possesses unlimited plant food. Soil when left to itself will soon run short of the food necessary to promote the rapid growth of your orchard, unless it is replenished by a fertilizer of the right kind.

Beaver Brand Animal Fertilizers

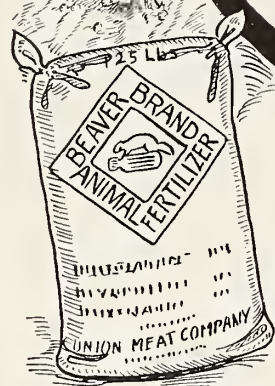
"A fertilizer for every soil"

are rich in the constituent elements that will revitalize your soil. By its use an increase in the quality and quantity of your fruit is possible, and the natural growth of your orchard is certain.

Place your order today.
Address
Box 101 for Folder.

UNION MEAT COMPANY

NORTH PORTLAND
OREGON.



medium size fruit, we shall have to provide 100,000 barrels or 300,000 boxes at the lowest estimate. At present the minimum market value of this fruit is \$3 a barrel. I figure the whole undertaking would cost not less than \$500,000, but when we stop to figure that every person in this country, no matter what his nationality may be, could easily lend a hand in the undertaking, it is not such a difficult proposition as one might suppose."

Apple men hope to have the European belligerents to agree upon a one-day armistice when the apples are distributed, and it is planned to get everything in readiness for the vessel to sail on National Apple Day, October 19, so that the consignment may reach the various fighting zones and hospitals the early part of November, when Europe's scant fruit supply will have been exhausted for this season.

APPLE SHIPPERS' COMMITTEE

R. J. Coyne, of Coyne Bros., Chicago, chairman.
T. O. Melton, Birmingham, Ala.
Warley Fruit & Produce Co., Mobile, Ala.
Scott Mayer Commission Co., Little Rock, Ark.
J. T. Nash, of Klein Simpson Fruit Co., Los Angeles, Cal.
C. E. Virden, of California Fruit Distributors, Sacramento, Cal.
L. M. Speigl, of A. Levy & J. Zentner Co., San Francisco, Cal.
A. S. Donaldson, of Donaldson Fruit Co., Denver, Colo.
E. M. Merrick, Washington, D. C.
J. Nooney, of J. Nooney & Co., Jacksonville, Fla.
Crenshaw Bros. & Saffold, Tampa, Fla.
W. W. Anderson, of W. W. Anderson & Son, Atlanta, Ga.
E. L. Stanley, of E. L. Stanley Co., Columbus, Ga.
C. E. Newton, of C. E. Newton & Bros., Macon, Ga.
Nelson & Finch, Peoria, Ill.
R. V. Bahr, of Pure Ice & Cold Storage Co., Springfield, Ill.
R. H. Pennington, of R. H. Pennington & Co., Evansville, Ind.
J. H. King, of Vondersaar & Co., Indianapolis, Ind.
W. H. Grupe, of the Lagomarcino-Grupe Co., Burlington, Iowa.
O. West, of C. C. Taft & Co., Des Moines, Ia.
Wm. Hanson & Sons, Dubuque, Iowa.
Palmer Fruit Co., Sioux City, Iowa.
W. O. Anderson, Topeka, Kan.
T. C. Bayless, of Bayless Fruit Co., Lexington, Ky.
Charles Scholtz, of Denunzio Fruit Co., Louisville, Ky.
Charles Sugarman, of Kohlman Bros.-Sugarman, New Orleans, La.
U. Grant Border, of T. H. Evans Co., Baltimore, Md.
Cecil Cummings, of Sands, Furber & Co., Boston, Mass.
H. J. Perkins, of Henry Perkins Co., Springfield, Mass.
W. N. Gleason, of W. N. Gleason Co., Worcester, Mass.
John D. Wiley, of D. O. Wiley & Co., Detroit, Mich.
T. F. Mosely, of Mosely Bros., Grand Rapids, Mich.
W. G. Baldwin, of Fitzsimmons-Palmer Co., Duluth, Minn.
J. C. Famechon, of J. C. Famechon Co., Minneapolis, Minn.
C. Emerson, of C. Emerson & Co., St. Paul.
R. H. Jones, of Ginochio-Jones Fruit Co., Kansas City, Mo.
L. H. Hunt, of Hunt Bros. Fruit Co., St. Joseph, Mo.
George P. Schopp, of George P. Schopp & Co., St. Louis, Mo.
G. G. Trimble, of Trimble Bros., Omaha.
C. Wolters, of C. Wolters Co., Newark, N. J.
F. Brennsen, of F. Brennsen Son, Buffalo, N. Y.
Joseph Steinhardt, of Steinhardt-Kelly, New York.
G. E. Ward, of G. E. Ward & Co., Ravena, N. Y.
H. B. Cash, of E. M. Upton Cold Storage Co., Rochester, N. Y.
The Athens Ice & Storage Co., Athens, Ohio.
J. Castellini, Cincinnati, Ohio.
Geo. Myers, of Myers, Weil & Co., Cleveland.
L. K. Sutton, of Sutton Bros., Columbus, O.
M. O. Baker, of M. O. Baker & Co., Toledo, O.

The History of the World

From the Dawn of Creation until the Great War

Is depicted in art, science and industry and presented in wonderful colors

Panama-Pacific Exposition

San Francisco

This wonderful Exposition closes December 4th

Don't Miss It

Lest you always look back to 1915 with regret.

Scenic Shasta Route

Through the wonderful Valleys of the Willamette, the Sacramento, the Umpqua and the Rogue offers exceptional diversion.

Low Round Trip Fares

Full particulars with copy of booklet "Wayside Notes, Shasta Route" or "California and Its Two World Expositions" on application to nearest agent

SOUTHERN PACIFIC

John M. Scott, General Passenger Agent
Portland, Oregon.

R. B. Clayberger, of C. Wilkinson's Sons, Philadelphia.
 Chester Franzell, of Chester Franzell & Co., Pittsburgh, Pa.
 W. H. Fiske, of H. B. Fiske & Co., Providence, R. I.
 Ernest M. DuPre Co., Columbia, S. C.
 W. W. Scarborough Co., Knoxville, Tenn.
 Milton A. Dreyfus, of Roth Produce Co., Memphis, Tenn.
 I. T. Hertzka, Nashville, Tenn.
 A. A. Jackson & Co., Dallas, Tex.
 C. E. Harkrider, of Harkrider-Keith-Cooke Co., Fort Worth, Tex.
 Eugene Robinson, of Richmond Cold Storage Co., Richmond, Va.
 E. H. Jennings, of Jennings Bros., Roanoke, Va.
 H. T. Lang Co., Eau Claire, Wis.
 Fred Grossenback, of A. Grossenback, Milwaukee, Wis.

A plant to exploit apples is being arranged by the trustees of the Spokane Fruit Growers Co. and a committee from the Chamber of Commerce of Spokane. The Chamber of Commerce believes that increased consumption and better prices can be obtained if the fruitgrowers of that section spend the necessary amount of money in publicity required for this purpose. That the Chamber of Commerce believes in publicity to advertise the apple is evidenced by the fact that they state they are ready to spend \$1,000 in an advertising campaign for this purpose. While no definite plan, in the latter part of August, had been effected, the matter was largely placed in the hands of Mr. Corbaley, secretary of the Chamber of Commerce, who is well known to the fruitgrowers of the Northwest, having been manager of the National Apple Show at Spokane during the last two years. Mr. Corbaley is credited with being one of the ablest and most popular publicity men in the Northwest.

Arthur M. Geary states that in Boston Northwestern apples are sold by the wagonload, containing various varieties, sizes and grades. This information will not be very gratifying to Northwest apple growers because they have ascertained by experience that job-lot cars do not bring good prices. Therefore it cannot be expected that jobbing by the wagonload, in job lots of sizes and grades, will bring good prices. When a retailer or wholesaler has to purchase a job lot containing a lot of stuff that he does not want in order to get some that he does want, the average price cannot help but be low. There has been a strong demand on the part of dealers to buy in straight carloads of single varieties of certain grades with size specifications. Such carloads certainly bring the best money, and inasmuch as fruitgrowers, through marketing associations, have learned that the job-lot tramp grades sell at very low prices, it seems that they should wake up and load their cars in the way the trade demands and in the way that will bring the most money.

Following is a list of shippers reported approved by the Growers' Council as announced by W. H. Paulhamus: Hays Fruit Co., North Yakima; Randolph Fruit Co., North Yakima; The Fruit Exchange, Kennewick;

Our Special Clubbing Offer

"Better Fruit" offers to its readers a splendid clubbing list. These rates do not apply to Canada, owing to extra postage.

Through lack of space we are unable to give a more extended clubbing list. If this clubbing list does not meet your requirements, please make up a clubbing list that you desire, send it to us and we will advise you what the list will cost you.

Everybody's	\$1.50	Hoard's Dairyman	\$1.00
Delineator	1.50	Review of Reviews.....	3.00
Better Fruit.....	1.00	Farm Journal (5 years).....	1.00
		Better Fruit.....	1.00
Total	\$4.00	Total	\$6.00
All for	2.75	All for	3.70
Outlook	\$3.00	Ladies' World	\$1.00
Scribner's	3.00	Modern Priscilla.....	1.00
World's Work	3.00	Pictorial Review.....	1.00
Better Fruit.....	1.00	Better Fruit.....	1.00
Total	\$10.00	Total	\$4.00
All for	6.45	All for	2.75
Scribner's	\$3.00	American Swineherd	\$.50
Delineator	1.50	Everybody's	1.50
Everybody's	1.50	Oregon Agriculturist .....	.50
Better Fruit.....	1.00	Better Fruit.....	1.00
Total	\$7.00	Total	\$3.50
All for	4.50	All for	2.60
American Magazine	\$1.50	Fruit Grower and Farmer.....	\$1.00
Woman's Home Companion.....	1.50	Good Housekeeping	1.50
Better Fruit.....	1.00	Better Fruit.....	1.00
Total	\$4.00	Total	\$3.50
All for	2.15	All for	2.60
Woman's Home Companion.....	\$1.50	Northwest Poultry Journal	\$.50
American	1.50	Gleanings in Bee Culture.....	1.00
Better Fruit.....	1.00	Review of Reviews.....	3.00
Total	\$4.00	Better Fruit.....	1.00
All for	2.80	Total	\$5.50
Aeronautics	\$3.00	All for	3.40
Good Housekeeping	1.50	Pacific Homestead	\$1.00
Better Fruit.....	1.00	Delineator	1.50
Total	\$5.50	Better Fruit.....	1.00
All for	4.30	Total	\$3.50
Motion Picture Magazine	\$1.50	All for	2.60
American Boy	1.00	Western Farmer	\$1.00
Better Fruit.....	1.00	Harper's Bazaar	1.50
Total	\$3.50	Everybody's	1.50
All for	2.80	Better Fruit.....	1.00
Automobile Journal	\$1.50	Total	\$5.00
Scientific American	3.00	All for	3.75
Better Fruit.....	1.00		
Total	\$5.50		
All for	4.70		

FOR FALL PLANTING

BULBS, ROSES, TREES

64 page Autumn Catalog

listing the most profitable and satisfactory varieties for commercial and home plantings
 Write now. Ask for Catalog No. 201

**Strawberries
Rhubarb
Asparagus**
 for fall planting
 give sure and quick
 returns and can be
 made to pay big profits.

Order early. Your inquiries will have prompt attention. It pays you to have your order on file when the shipping season begins.

Our Trees and Plants
 are grown in Oregon
 Sturdy, healthy stock with
 heavy, fibrous roots. Dug

and packed as ordered. Bearing
 official certificate of inspection.

**PORTLAND SEED
COMPANY**
 PORTLAND, OREGON



FARMERS SHOOTING CLUBS



Provide just the fun the farmer needs. Be sociable. Invite the neighbors to a trapshoot in the meadow. Find out who is the best shot. Meet once a week in winter—once a month in summer, and soon all will be good shots.



HAND TRAP

throws clay targets 40 to 75 yards just like flying ducks or quail.

Great practice for hunters. Fun for everybody. Let the women try. They ought to know how.

The Hand Trap costs only \$4.00 at your dealers, or sent prepaid by us. Write for free Hand Trap Booklet No. S-534, also "The Sport Alluring" (men) and "Diana of the Traps" (women).

DU PONT POWDER CO.

Established 1802 Wilmington, Del.

Richey & Gilbert Co., Toppenish; Thompson Fruit Co., North Yakima; The E. E. Samson Co., North Yakima; C. R. Paddock, North Yakima; Pike & Blood, North Yakima; Yakima Fruit Sellers, North Yakima; Richey & Gilbert, North Yakima; Horticultural Union, North Yakima; Hafener & Plath, North Yakima; Producers' and Consumers' Alliance, North Yakima; J. F. McCurdy, Wapato; H. H. Davis Co., Kennewick; Northwestern Fruit Exchange; North Pacific Fruit Distributors (which includes the Yakima Valley Fruit Growers' Association); A. F. Carpenter; J. McPhee Ferguson; J. E. Shannon; Wright Fruit Co.; Fruit Growers' Exchange, Selah; Roy C. Brown, Zillah.

There is some talk about W. H. Paulhamus running for governor, but Mr. Paulhamus has not yet expressed himself definitely so far as has been ascertained. It is generally conceded and admitted that Paulhamus is not only a very able man and that he would make an excellent governor, but the fruitgrowers believe that he has a greater opportunity to do more good by devoting his time to the berry business of Puyallup, which he has built up extensively and successfully. Fruitgrowers all over the Northwest are also putting up a strong claim for his services, believing that he can be of more value to the Northwest as a member and president of the Fruit Growers' Council than in any other position.

The Apple Show at the International Apple Shippers' Association at Chicago was a winner, both in quality and quantity. At the convention in Boston in 1914 the exhibit consisted of 1,100 plates, but this year the exhibit at Chicago consisted of 2,500 plates. Exhibits were made from the Northwest by Wenatchee, Hood River, Payette, Idaho, and also Sebastopol, California. The latter section is well known in the trade on account of being the largest producing section of Gravensteins of any single district in America.

According to general reports, business in the United States has been showing material improvement. A map has been compiled showing every state in the Union, and the states where business is good are marked in white and other states where business is only moderate are shown slightly shaded in black, while where business is below normal or poor that state is marked all black. Many states show white and some states show black shading, while some show slightly black shading, whereas only two states are put down in black or reported "poor."

F. E. DeSelle, horticultural inspector from Yakima, accompanied by Dr. J. W. Hotson, pathologist, connected with the Experiment Station at Pullman, who is doing special work in Yakima Valley, made a visit to Hood River in the month of August. Mr. DeSelle is one of the most energetic inspectors located anywhere in the Northwest, with an extensive acquaintance among fruitgrowers all over, having been a regular attendant at all of the horticultural meetings and apple shows held in the Northwest.

Philadelphia fruit dealers attended the International Apple Shippers' Convention at Chicago in large numbers, being very enthusiastic in according the meeting a great success.

West Virginia reports the apple crop of excellent quality, there being about 40 per cent of last year.

Things We Are Agents For

Knox Hats

Alfred Benjamin & Co.'s Clothing

Dr. Jaeger Underwear

Dr. Deimel Linen Mesh Underwear

Dent's and Fownes' Gloves

Buffum & Pendleton

311 Morrison Street

PORTLAND, OREGON

There seems to be something peculiar about the fruit business. Prices do not depend entirely upon quantity, but they are due largely to other conditions which are not always tangible. It is usually a fact that when early fruits like cherries, apricots, plums and peaches bring low prices, all other kinds of fruits later in the season, like pears and apples, sell also at low figures. When the demand is good at the beginning of the season, fruit selling at good prices, usually this condition prevails throughout the year.

Mr. D. J. Whitney, editor of The Orchard and Farm, a short time ago made a flying trip through the Northwest, visiting the editor of "Better Fruit" on his way. Mr. Whitney is one of the best informed editors of all the fruit publications on the Pacific Coast. Orchard and Farm is one of the best fruit publications, typographically, in the State of California, and ably edited by Mr. Whitney.

It is stated by local Wenatchee papers that E. Wagner & Sons have contracted about 300,000 boxes straight orchard run of apples at an average of \$1.00 per box for Australian and South American markets. These purchases in a large measure consist of the early and fall varieties.

Statement of the Ownership, Management, Circulation, Etc.

Required by the Act of August 24, 1912.

of "Better Fruit," Published Monthly at Hood River, Oregon for October, 1915

Note: This statement is to be made in duplicate, both copies to be delivered by the publisher to the postmaster, who will send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office.

Name of Editor, E. H. Shepard. Post office address, Hood River, Oregon.

Name of Managing Editor, E. H. Shepard. Post office address, Hood River, Oregon.

Name of Business Manager, E. H. Shepard. Post office address, Hood River, Oregon.

Publisher, Better Fruit Publishing Company. E. H. Shepard, sole owner and publisher. Post office address, Hood River, Oregon.

Owners: (If a corporation, give its name and the names and addresses of stockholders holding 1 per cent or more of total amount of stock. If not a corporation, give names and addresses of individual owners.) E. H. Shepard, sole owner. Address, Hood River, Oregon.

Known bondholders, mortgagees and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities: (If there are none, so state.) None.

Average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above: (This information is required from daily newspapers only.)

E. H. SHEPARD, Editor and Publisher.

Sworn to and subscribed before me this 25th day of September, 1915.

(Seal)

ERNEST C. SMITH,
Notary Public for the State of Oregon.

(My commission expires August 7, 1916.)



Branch Plant—Central Ave. at Fourth St.—S. P. Tracks

Los Angeles Ice and Cold Storage Co.

P. O. Box 643, Station C

LOS ANGELES, CALIFORNIA

Ship Your Apples—

—to the LOS ANGELES market, the distributing center of the great Southwest.

The California apple crop is about 1,800 cars short this season, which makes Los Angeles an excellent market.

Our two warehouses equipped with all the modern improvements which practice has taught us to be the best — with our experienced warehousemen who KNOW and DO IT, offer you an unusual inducement to cold store with us the apples you ship to this market.

We are in a position to render you a service that will please you.

Direct railroad connections — rates reasonable — communicate with us now

The Spokane National Apple Show

By Robert S. Phillips, Spokane, Washington.

THE National Apple Show, which has been a feature at Spokane for seven years, will be held again this fall, the business men of Spokane having recently decided to guarantee whatever deficit may result. While none of the seven apple shows held thus far have come out even financially, the business interests of Spokane have chosen to consider only the broad question of assisting the Northwestern fruit industry, even though they know they must be prepared to pocket a tidy loss each year. The eighth annual show will be held November 15 to 20, probably in the spacious grounds beneath the joint overhead tracks of the O.-W. R. & N. Company and Chicago, Milwaukee and St. Paul. Robert H. Kipp, a

well-known apple man, has been appointed chairman of the board of trustees.

This year the growers' conference will be directed by the Washington State Horticultural Society, which will be in charge the first three days. The Northwest Fruit Growers' Council, of which W. H. Paulhamus is chairman, has called a conference of growers to be held November 18 and 19 at the apple show. Marketing problems, especially those connected with the handling of the 1916 crop, are announced to be the chief subject of this conference. The closing day's session will be devoted to by-products of the fruit industry.

"Next year's marketing problem is the most vitally important question before Northwestern apple growers," declares Gordon C. Corbaley, manager of the show. "The Northwest in 1916 will be called on to sell between 18,000 and 22,000 carloads of boxed apples, as against 9,000 cars this year. Our ability to cause the market to absorb an increase of more than 100 per cent depends upon the way we systematize distribution. At the apple show the growers will consider the facts gathered by the Northwest Fruit Growers' Council during the 1915 marketing season, and will appoint committees to work out details to permit final and definite action at the annual meeting of the Council in January. "The women's department of the show, which was a wonderful success last year, will be repeated on a greatly enlarged scale. Demonstrations of grade and pack by the inspectors of the principal Northwestern boxed-apple shippers will be features of the apple show. The demonstrations are an important educational feature. Prizes are to be offered the inspectors for the most instructive and educational exhibit from the standpoint of benefit to the growers. The inspectors will be invited to enter five-box exhibits of the red, the partly red and green varieties, packing the boxes so as to demonstrate the extremes permissible under the standard classifications and illustrate the sizes permissible. In this connection the inspectors will be asked to conduct half-hour question round tables each afternoon, when growers may inquire regarding the grades and packs illustrated. The grade and pack exhibits will supplement the packing school and contests which have been features of previous apple shows. To stimulate interest in an absolutely uniform system

YAKIMA FRUIT SELLERS

North Yakima, Washington

A Central Selling Agency for Yakima

EXCLUSIVE DISTRIBUTORS FOR

Yakima County Horticultural Union

Yakima Fruit Growers' Exchange

Richey & Gilbert Company

Our organizations handled 2,500 carloads of Yakima Fruit last season. Hundreds of growers have joined our movement and we already have under contract a much larger proportion of Yakima tonnage than ever before. Additional tonnage is coming to us daily. We have a large proportion of the fruit in the early districts — therefore we can load the early assorted cars—money-makers for the trade and the growers.

WRITE OR WIRE US IN SEASON

H. M. GILBERT, General Manager

FRED EBERLE, Asst. Manager

Only a Car of Apples

OR

Tricks of the Trade Exposed

(By C. C. P.)

Br-r-r-r-r-r-r-z!

Bunco Skinner, the Prond Produce Pirate, deftly lighting a monogrammed Turkish cigarette with his right, gracefully bent over to the buzzer, and with his carefully manicured left rang for a messenger boy.

A moment before, his private secretary, Miss Keys, had laid a thick swad of telegrams on his glistening mahogany desk.

"Ah, hah!" said B. S. (for thus shall we refer to the villain in the future) — "Ah, hah!" repeated B. S., as he inhaled a fragrant draught from his privately monogrammed cigarette — "Today I make a killing." - - -

The continuation of this exciting story will be furnished on request. **WRITE FOR IT TODAY**—it is great.

Produce Reporter Company

CHICAGO

of grade and pack for every Northwestern district the five-box awards will be made not only on the basis of the most perfect fruit, but on the skill with which the different styles of packing are illustrated. In scoring the judges will emphasize the ability with which the various packs are exemplified. While the by-products proposition has been at a standstill since the European war began, making it more profitable to sell fresh fruit, that condition seems now to be passing, and the by-products features of the apple show promise to make a live subject. This will be discussed in the conference November 20."

Land Show in Portland Opens Soon

October 25 will witness the opening in Portland of the second annual Manufacturers' and Land Products Show. The exposition will be in progress until midnight, November 13, and each day will offer a special feature, event or program in which some city, town or community of the Northwest will take part. The exhibition is intended to show the whole of the Northwest under one great roof. More than 75,000 square feet will be devoted to exhibit space, and Oregon, Washington and Idaho counties and communities have been invited to take part. The management of the exposition is this year giving free space to land products displays and a grand prize is to be given for the best county exhibit.

Portland's Chamber of Commerce presents the exposition, and the directors of the show have been named by the Industries and Manufacturers' and the Oregon Development Bureaus, two of the most important in the work of the organization. Exhibits from the field, forest, factory and stream will be arranged in an attractive manner, and visitors will be given a truthful presentation of the agricultural, industrial and horticultural greatness of the Northwest. The exposition is open to exhibitors from the entire Pacific Coast. The exposition in Portland comes at a time of the year when the state and county fairs are over and this assures an excellent display of exhibits of all kinds in the Oregon metropolis. Consumer and producer will meet at the exposition, new markets will have a wider knowledge of what the Northwest produces. It will also present in a truthful manner the exact opportunities for homeseekers. It is intended that the exposition will prove an ideal medium to advertise many commodities to demonstrate and prove beyond question of doubt that the Pacific Northwest has many possibilities as a great manufacturing and industrial center.

Leading manufacturers of the Northwest assert the industries of the country are becoming better known each year as a result of the activities of the managers of the various concerns to acquaint the people with the articles that are produced here. In no better way can the manufacturer show to advantage what he really makes than by a comprehensive exhibit at expositions like the Manufacturers' and Land Prod-

Mr. Planter!

DID YOU KNOW
THAT A

Genuine Vrooman Strain Franquette Walnut Tree

will come into bearing as early as three or four years after planting?

And that there are many instances of four and five-year-old trees (after planting) producing close to a bushel of nuts?

And that there are thirty-two (32) pounds to the bushel?

And that from 22c to 25c per pound is an average market?

And that Oregon soil and climate make for perfection in treegrowing?

And that every order is backed by 30 years' experience in growing, packing and shipping?

Just a line will bring you our new illustrated catalogue and a lot of valuable information.

Albany Nurseries

ALBANY, OREGON

The Paris Fair

Hood River's Largest and Best Store

RETAILERS OF

EVERYTHING TO WEAR

AGENTS FOR

HAMILTON & BROWN AND
THE BROWN SHOES
HART, SCHAFFNER & MARX
CLOTHES

MANHATTAN SHIRTS
JOHN B. STETSON HATS
NEMO CORSETS

Strictly Cash—One Price to All

True-to-Name Nursery

GALLIGAN BROS.
Proprietors

HOOD RIVER, OREGON DUFUR, OREGON

Growers of high grade nursery stock, guaranteed true-to-name. Breeders and importers of purebred Big Type Poland China Hogs. Service boars, bred gilts and weaning pigs for sale.

For catalog of nursery stock and prices on swine, write

True-to-Name Nursery

HOOD RIVER, OREGON


ucts Show, where more than 20,000 people daily view the displays. Applications for space have been received from many concerns, and by September 1st the success of the second annual show was assured. More than 4,500 members of the Chamber of Commerce are taking a personal interest to make the exposition the greatest of its kind ever staged in the West. Industrial exhibits will be arranged in the Armory and a temporary structure covering more than a city block will be erected to house the soil products.

Special prizes will be awarded for apple and potato displays, and the best individual farm exhibit. The exhibit of apples at this year's show will be a feature. Announcement is made by the Land Products Committee of the exposition that more than two-thirds of the counties of Oregon will send exhibits to Portland, and after the holding of the State Fair there is a possibility of having a display of some kind from each of the thirty-five counties in the state, as well as from sections of Washington and Idaho, especially the Washington counties in the Columbia River watershed. The transportation lines are co-operating to make the exposition a success, and low fares for the round trip will prevail while the show is in progress.

The Mutual Creamery of Utah is reported having announced that they will purchase 20,000 cows for the State of Utah during the next twelve months. The dairy business is proving a profitable diversity line for the fruitgrowers. There are reasons for this. Orchards produce better when the nitrogen supply and humus content is maintained in the soil, which can be done by producing cover crops of clover, alfalfa or vetch, which in turn will furnish feed, according to the size of the orchard, sufficient to maintain good-sized dairy herds.

Philadelphia papers are reported as strong on the idea, "Direct from the grower to the consumer." That may be all right and undoubtedly is in a small way, but the Northwest would have a big job if the individual growers would tackle the problem—each one finding for himself consumers to purchase his crop. A few growers can do this in a small way in nearby markets, but when it comes to moving 15,000 carloads of apples which have to go under ice that is another problem. It will be a long day before the grower can do away with either the dealer or the retailer.

John B. Cancelmo of Philadelphia, Pennsylvania, one of the high-class fruit dealers of the United States and one of the most popular men in the trade, in a personal letter to the editor reports the International Apple Shippers' convention as being the greatest and most successful meeting ever held. Mr. Cancelmo is one of the largest handlers of boxed apples from the Northwest in Philadelphia.



Won Highest Exposition Honors

Highest in lubricating efficiency—highest among the many oils competing—a triumph for lubricating oil made from asphalt-base crude.

ZEROLENE

the Standard Oil for Motor Cars

The Jury of Awards at San Francisco and San Diego awarded Zerolene the gold medal in recognition of its superiority.

STANDARD OIL COMPANY
(California)
Portland

HOOD RIVER VALLEY NURSERY COMPANY

Phone 5634

Route No. 3, Box 227
HOOD RIVER, OREGON

Plantation four miles southwest of station, Belmont Road

We will be pleased to show you trees, apple trees that have a heritage, a quality that should be considered by everyone who plants a tree. Our trees are grown in clean hillside virgin red shot soil with clay subsoil, producing the most vigorous root system. Our buds are selected from the best bearing healthy Hood River trees that make the Hood River apple famous throughout the world. Our trees will give you satisfactory results in vigor, fruit and quality. Ask for catalog. We guarantee our products. Apples, pears, peaches, apricots, almonds and walnuts. A complete line of the best varieties of all kinds of fruits.

H. S. BUTTERFIELD, President



SUGAR PRICES CUT!

Buy at wholesale from Jones Cash Store

Again this old reliable mail order house comes to the front with a smash at high sugar prices! We handle more sugar than any other concern in the Northwest. Supply sugar for your fruit and preserving needs, at wholesale. If you have never ordered by mail from us, take this chance and get acquainted.

Best Fruit or Berry Sugar \$6.15

100-Pound Sack Now for ...



Ball-Mason Fruit Jars Reduced

Very best quality.

PINTS, dozen	.....50¢
Gross	\$5.50
QUARTS, dozen	...55¢
Gross	\$6.50
½ GALLONS, doz.	...80¢
Gross	\$9.00
FRUIT JAR CAPS, dozen	.....20¢
Extra Heavy Rubbers, dozen	.....6¢

Other Timely Grocery Bargains

Harvest-time groceries and provisions of all kinds at reduced prices. Send for special grocery catalog. For instance—

Canned Tomatoes, dozen	....89¢
Fancy Evap. Peaches, lb.	....6¢
4-gal. Keg of Pickles	.....68¢
Economy Coffee, lb.	....15¢
Eastern Bacon, pound	...18¢

THIS COUPON BRINGS YOU OUR BIG FREE CATALOGUE NO. 63

Hundreds of pages, filled with descriptions and pictures of mail order bargains! Fill out the coupon or send your name on a postal.

Jones Cash Store

Established 1882
Front and Oak Streets
Portland, Oregon

Sign and Mail to Us N-O-W!

I want to be shown how to buy at lower prices. Kindly mail your big Catalog No. 63 FREE to me.

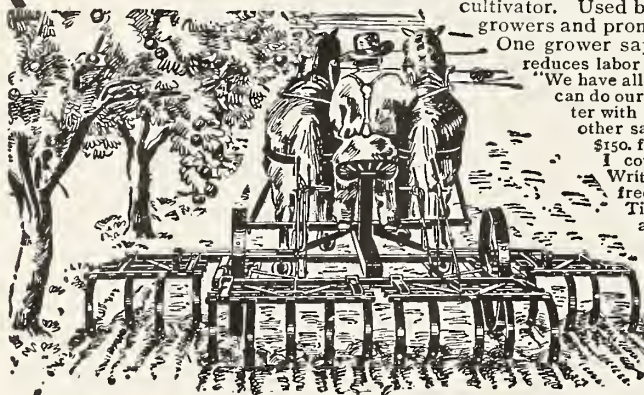
NAME

ADDRESS

FORKNER SPRING TOOTH TILLERS

WORK RIGHT UP TO YOUR TREES

Cultivate entire surface between rows without disturbing boughs or fruit. Does more work—easier and quicker—and leaves better surface mulch than any other cultivator. Used by thousands of fruit growers and pronounced indispensable.



One grower says: "The Forkner reduces labor 40%". Another says: "We have all kinds of tools, but we can do our work quicker and better with a Forkner". Still another says: "I wouldn't take \$150. for my Forkner Tiller if I couldn't get another". Write today for catalog and free book—"Modern Soil Tillage"—invaluable to any farmer or fruit grower. Mailed free. Write today.

**LIGHT DRAFT
HARROW CO.
601 Nevada St.
Marshalltown, Ia.**

Prune and Grafted Walnut Trees

Also Apples, Pears, Peaches, Plums, Apricots, Cherries, Small Fruit Plants, Etc.

Can be bought now at Greatly Reduced Prices

Write today submitting your want list for quotations.

LAFAYETTE NURSERY CO., LAFAYETTE, OREGON



**RHODES DOUBLE CUT
PRUNING SHEAR**

Pat'd June 2, 1903.

**RHODES MFG. CO.,
520 S. DIVISION AVE., GRAND RAPIDS, MICH.**

THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay Express charges on all orders.

Write for circular and prices.

Let Us Help You Start A Profitable Business—

There is big money in making cider from cull fruit, windfalls and unmarketable fruit for fruit growers at a fixed price per gallon. Let us tell you how this is done on a "Mount Gilead" Hydraulic Cider Press. Our presses are helping thousands of men to a comfortable income and with a very small investment. Let us start you.

We manufacture Evaporators, Apple Butter Cookers, Vinegar Generators, Cider and Vinegar Filters, etc. Let us tell you about "Mount Gilead" outfits and how you can put good profits in your pocket by their use.

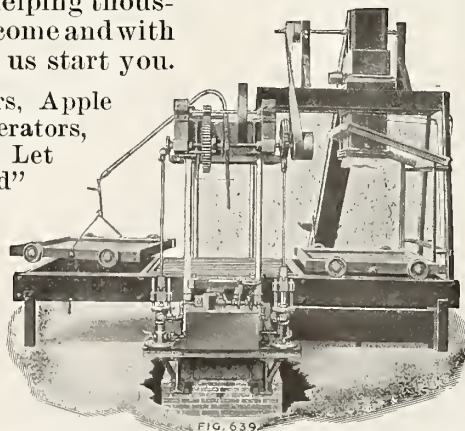
The Hydraulic Press Mfg. Co.

60 Lincoln Ave., Mt. Gilead, O.

Pacific Coast Representatives

THE BERGER & CARTER CO.

17th and Mississippi Sts., San Francisco, Cal.
Pacific Building, Seattle, Wash.



The Growers' League of Wenatchee has adopted a resolution which will require every packer to be registered. To register a packer must call at the office of the League and show references as to his ability and deposit a registration fee of \$1.00. Through this system the League believes it will be able to keep a line on poor packers and improve the Wenatchee apple pack very materially. Selling agencies and shippers operating in the Wenatchee district have promised their support to this system, which assures it of being a success.

The Libby, McNeil Cannery at The Dalles, Oregon, has done an extensive business this year. In addition to putting up an immense quantity of cherries from The Dalles, Hood River, Yakima and surrounding territory, they have put up a large amount of pears, buying 200 carloads from the Yakima district alone.

The Hood River Co-operative Creamery.—The fruitgrowers of Hood River several months ago organized and have been operating successfully a co-operative creamery which has proven very profitable to the fruitgrowers and a very satisfactory side line in connection with growing fruit.

Southern Oregon apple crop and pear crop are reported very light this year on account of frosts and exceedingly dry weather. It is stated by some who have visited this district that the shipments in pears and apples will probably be around 300 carloads.

J. D. Adams, member of the Growers' League of Wenatchee, attended the International Apple Shippers' convention at Chicago and is reported as feeling optimistic about the prospect of good prices on apples in the year 1915.

It is reported that Fred Olds of the Wenatchee district has contracted his apple crop, consisting principally of King Davids and Jonathans, damaged considerably by hail, at \$1.00 per box.

G. W. Coburn of Wenatchee Fruit Growers' Association and J. F. Segreue of the Cashmere Union attended the International Apple Shippers' Convention in Chicago in August.

The New York Central Railway officials report in 1914 they shipped out of Western New York 26,639 cars of apples.

Sumner, Washington, cannery processed a quantity of cherries this year for the first time on the maraschino method.

The ten-year-average apple crop, according to the United States government report is 176,000,000 bushels per year.

The Ozark peach crop is reported to have amounted to one-half million dollars this season.

The Apple Crop of the U. S. for 1914 and 1915

In 1914 the Agricultural Optimist reported the apple crop of the United States as 40,500,000 barrels. The opinion was frequently and generally expressed by the trade that the apple crop of 1914 was somewhere from 50,000,000 to 60,000,000 barrels. Striking an average between the Agricultural Optimist estimate and the dealers' minimum of 50,000,000 barrels would mean the crop was approximately 45,000,000 barrels. If anyone would take the various estimates that have been reported through the trade fruit journals and through various other sources and strike an average of the percentages, figuring out the total accordingly, he would probably arrive at the conclusion that the apple crop of the United States for the year 1915 is approximately in the neighborhood of 50 per cent. In making your estimate, however, you must bear in mind that some of the small producing sections have very high percentages in the way of crops this year, while some of the large producing sections have 50 per cent or less. New York State, the largest apple state in the Union, is estimated at from 40 to 50 per cent; Pennsylvania and New England, somewhere near the same percentage. In the Middle West, in Missouri and Arkansas and some other states the crop is large compared with last year, but it seems fair to assume that 50 per cent would be approximately a fair percentage. Taking 50 per cent of last year's crop, founded on an average from the Agricultural Optimist and the trade estimate, would figure out a crop of about 22,500,000 barrels, which is the lowest crop reported in the last twenty years. The following is an approximate list of the apple crop from the year 1895 to date, which has been printed in many publications. While we cannot vouch for the correctness, in all probability it is approximately correct: 1895, 60,500,000 barrels; 1896, 69,000,000 barrels; 1897, 41,000,000 barrels; 1898, 28,500,000 barrels; 1899, 58,500,000 barrels; 1900, 57,000,000 barrels; 1901, 26,970,000

Notice to Orchardists

On page 6 there is a photograph of orchard cultivation that will interest all fruit growers.

Caught 51 Rats One Week

Trap resets itself; 22 inches high; will last for years; can't get out of order; weighs 7 pounds. Cheese is used, doing away with poisons. This trap does its work, never fails and is always ready for the next rat. When rats and mice pass device they die. Rats are disease carriers, also cause fires. Rat catcher sent prepaid on receipt of \$3.00; Mouse catcher, 10 inches high, \$1.00. Money back if not satisfied. One of these rat catchers should be in every school building.

H. D. SWARTS, INVENTOR AND MANUFACTURER

Universal Rat and Mouse Trap

Box 566

SCRANTON, PA.



Let 'er Rain

Fall rains won't interrupt the work if you have a Caterpillar Tractor. Its long, wide endless track doesn't pack moist ground as round wheels do—doesn't slip or mire in the soft places. Get a Caterpillar now and plow when horses and round-wheel tractors are idle. Use it 200 days a year instead of 75.

CATERPILLAR

Reg. U.S. Pat. Off.

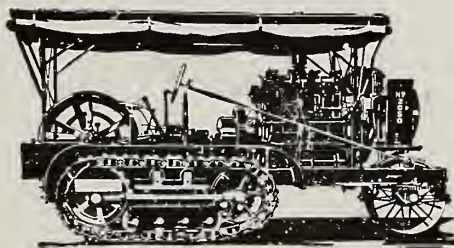
Don't say Caterpillar unless you mean Holt!

One owner farmed 1500 acres and earned \$10,000 outside in 15 months—only \$200 repairs.

It's being able to work every day in the year that makes the Caterpillar a money getter for you. And the upkeep cost is low—particularly in the new models.

The Caterpillar today is much stronger and simpler than the old 1911 and 1912 models. 5 pieces in the track unit where it took 25 three years ago—stronger frame—all cut-steel gears in dust-proof cases—scores of important refinements.

Send for new Bulletin BE 276.



**THE
HOLT MFG. CO.**
(Incorporated)

Spokane, Wash. Stockton, Cal.
Portland, Ore. Peoria, Ill.

Cons. Wagon & Mty. Co., Sales Agts.
Salt Lake City, Utah

"BLUE RIBBON"

(EXTRA FANCY)

"RED RIBBON"

(FANCY)

Quality Brands of Yakima Apples

When ordering apples specify Blue Ribbon Brand and be assured of the best the market affords. All apples packed under our personal supervision and inspection.

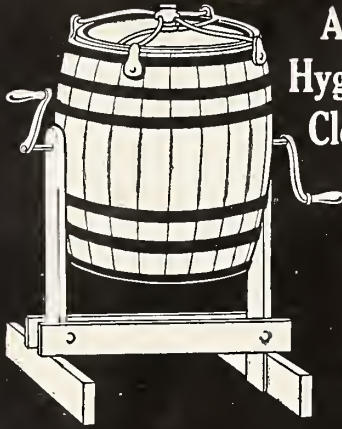
WRITE FOR INFORMATION
AND PRICES

Yakima County Horticultural Union

FRED EBERLE, Manager

NORTH YAKIMA, WASHINGTON

CHURNS



Are Made
Hygienically
Clean with
Little
Labor by

Large
Sifter Can,
with Full
Directions, 10c



barrels; 1902, 46,625,000 barrels; 1903, 42,626,000 barrels; 1904, 45,360,000 barrels; 1905, 24,300,000 barrels; 1906, 38,280,000 barrels; 1907, 29,540,000 barrels; 1908, 25,850,000 barrels; 1909, 25,415,000 barrels; 1910, 23,825,000 barrels; 1911, 31,000,000 barrels; 1912, 47,825,000 barrels; 1913, 30,900,000 barrels; 1914, 40,500,000 barrels; 1915, no reliable estimates up to the present time, but in all probability somewhere between 20,000,000 and 25,000,000 barrels, or a good, fair guess would be 22,500,000 barrels.

Mr. Darlington, the local inspector at Cashmere, has been making an estimate of the apple crop of that district. Cashmere reports through Mr. Ralph Dunham, assistant to Mr. Darlington, that the pear crop of that district is exceptionally good this year. The Cashmere Union made arrangements to hold a packing school during the month of August for the purpose of instructing their growers to do more perfect packing. Packing schools have been of great educational value, and where held in the different districts the packs of different fruits have been greatly improved.


The apple crop of 1914, taking a fair average of estimates, would be about 45,000,000 barrels; the crop of 1913 was reported at 30,000,000 and the crop of 1915 looks like about 22,500,000 barrels, or one-half of the 1914 crop or three-quarters of the 1913 crop.

Market Expert Expresses Opinion

Chas. J. Brand, head of the Bureau of Markets and Rural Organizations, who has been visiting the West, is reported as expressing the following opinion, according to local papers in the various sections where he visited, conferring with the growers in reference to marketing, endeavoring to assist them in every way possible. His opinion outlines in a general way his views, which will give the growers some idea of where they "are at" in reference to the Fruit Growers' Council, although his opinion is not final or binding in any way. "There are some close questions to be considered," said Mr. Brand this morning, "and I think that I have been quoted incorrectly in some of the papers of the Northwest. I hold that any body of growers or stockholders in a concern may agree upon prices and marketing practices under the pro-

POWER WASHER

WOMAN'S FRIEND



A REAL POWER WASHER

Round rubber rubs the clothes, turns them over and over and forces the hot, soapy water through them. Washes tub full perfectly clean in 5 minutes. No wringers to shift. Nothing to get out of order. Special low price to introduce. Catalogue Free.

BLUFFTON MFG CO. BOX 86, BLUFFTON, OHIO.



ENCYCLOPEDIA OF PRACTICAL HORTICULTURE JUST OFF THE PRESS

The only complete, thorough manual of fruit growing published—covering every feature—planting, pruning, cultivating, spraying, diseases, harvesting, etc., as used and approved by Northwest fruit growers. Contains valuable statistics. All reading matter arranged conveniently for reference and indexed.

It tells how to do the things that every fruit grower must do who is growing fruit as a business.

THREE LARGE VOLUMES HANDSOMELY BOUND

Write for circulars containing full descriptive matter and prices.

ENCYCLOPEDIA OF PRACTICAL HORTICULTURE, 407 Miller Building, North Yakima, Wash.

Printing

**For the Fruit Grower
Manufacturer
and Merchant**

**Labels
Stationery**

**Booklets
Catalogs**

**Blank Books
Posters**

Write for Prices and Specifications. We can supply your wants quickly, accurately and economically

We print "Better Fruit"

F. W. Baltes and Company
Portland, Oregon

visions of the federal law. If the growers of this valley and Hood River and Wenatchee want to get into one growers' organization, as individual growers and not as members of another organization, I think that they have a perfect right to do so and will not in their operations come in conflict with the terms of the anti-trust act. As individual growers acting co-operatively they can control their marketing, but if they try to act as corporate units they are passing the limits of the law. Growers in this valley, Hood River and Wenatchee have not exceeded the limits of their rights under the anti-trust law by forming the Growers' Council, but they must join it as individuals and not by associations, such as the Fruit Growers' Association, the Horticultural Union and the like.

"When it comes to the question of the several associations affiliating for the purpose of control of markets I think the limits of the law are passed. When it comes to the Shippers' Council and Growers' Council attempting to co-operate in handling the marketing I am certain that this is in violation of the anti-trust law. I hope I make myself clear. A co-operative fruit organization, no matter how big, can act as the 2,500 stockholders of the steel corporation in the handling of their product. The limits of the law are passed when several of these co-operative organizations come together and attempt to control prices."

Sunshine Lamp
300 Candle Power

FREE

To Try In Your Own Home

Turns night into day. Gives better light than gas, electricity or 18 ordinary lamps at one-tenth the cost. For Homes, Stores, Halls, Churches. A child can carry it. Makes its light from common gasoline. No wick. No chimney. Absolutely SAFE.

COSTS 1 CENT A NIGHT

We want one person in each locality to whom we can refer new customers. Take advantage of our SPECIAL FREE TRIAL OFFER. Write today. AGENTS WANTED.

SUNSHINE SAFETY LAMP CO.
639 Factory Bldg., Kansas City, Mo.





Make Your Boy Happy!

by giving him **THE BOYS' MAGAZINE**. You could not give him a greater pleasure or a stronger influence for good. Each issue of this splendid magazine is filled with clean, fascinating stories and instructive articles, all of intense interest to every live boy. Also, each issue contains departments devoted to Electricity, Mechanics, Athletics, Photography, Carpentry, Stamps and Coins. A new, handsome cover in colors each month. Beautifully illustrated throughout, both in black and white and in colors.

Special Offer! For only \$1.00 we will send you **THE BOYS' MAGAZINE** for a whole year and a copy of the most useful book you ever read, "Fifty Ways for Boys to Earn Money," and this Electric Engine. This engine is considerably larger than illustration. Runs at variable speeds, either forward or backward, between 200 and 3,000 revolutions a minute on one dry battery. Absolutely safe and easy to operate. This Electric Engine is interesting and instructive and any boy will go wild over it.

Order To-day! Your subscription will be entered at once and the Electric Engine and Book will be forwarded to you immediately, all transportation charges prepaid. We'll refund your money promptly if you are not more than pleased with **THE BOYS' MAGAZINE**, the Electric Engine and the Book. (We refer you to any bank, mercantile agency or publisher as to our responsibility.)

Address **THE SCOTT F. REDFIELD CO.**
842 MAIN STREET,
SMETHPORT, PA.



(THE BOYS' MAGAZINE is on sale at all news-stands at 10c a copy.)



"John"~

"We are almost out of chocolate. Get a 3-lb. can of Ghirardelli's Ground Chocolate. Don't buy the bulk kind."

And John "obeyed orders" cheerfully, for of all the members of the household, John, the "boss," likes his breakfast cup of Ghirardelli's the most.

He knows what a delicious, sustaining beverage it is, what wonderful cakes, puddings and cookies his wife makes with its aid. He also knows that it gives the highest food value for the man who works hard, for the woman who must always be well, for children on the grow.

Order from Your Grocer Today

Ghirardelli's The Only Ground Chocolate

In 1/2-lb., 1-lb. and 3-lb. hermetically sealed cans. There's a double economy in buying the 3-lb. can.

D. GHIRARDELLI CO.

Since 1852

San Francisco

You are invited to visit the Ghirardelli Pavilion at the Panama-Pacific International Exposition and see a model chocolate factory in operation



LESLIE BUTLER, President
TRUMAN BUTLER, Vice President
C. H. VAUGHAN, Cashier

Established 1900

Butler Banking Company

HOOD RIVER, OREGON

Capital \$100,000.00

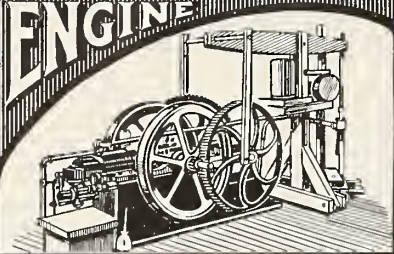
4% Interest Paid in our Savings Department

WE GIVE SPECIAL ATTENTION TO GOOD FARM LOANS

If you have money to loan we will find you good real estate security, or if you want to borrow we can place your application in good hands, and we make no charge for this service.

THE OLDEST BANK IN HOOD RIVER VALLEY

**Read my Book—
See my Prices—
Before you buy any
ENGINE**



This WITTE Engine, after 28 years, still giving good service to S. A. Stone, Chillicothe, Mo.

WITTE ENGINES

Kerosene, Gasoline & Gas

You can now own a good Engine for less than you can do without one.

LOOK AT THESE PRICES!

2 H-P, \$34.95; 4 H-P, \$69.75; 6 H-P, \$97.75;
8 H-P, \$139.65; 12 H-P, \$197.00; Prices F. O. B. Factory.

16 H-P, \$279.70; 22 H-P, \$359.80.
Stationary, Portable, Skidded and Sawrig styles. Standard for 28 years. Why pay two prices for any good engine or take chances on a poor, or doubtful engine for any kind of a price, when the WITTE costs so little and saves you all the risk.

LIBERAL 5-YEAR GUARANTY.

Easy terms of payment, at regular prices, if you don't wish to pay all cash.

Book Free Get my Book before arranging to try any engine. Costs nothing to be sure of your selection, even if you don't pick a WITTE. Learn the inside of the engine business and how to judge engines for yourself. Write us today.

ED. H. WITTE ENGINE WORKS,
1835 Oakland Ave.,
Kansas City, Missouri.
1855 Empire Bldg., Pittsburgh, Pa.



10c for Three Months

Trial subscription to leading fruit and garden publication. Gives timely information each month. Eighteen years old. Regular subscription rate \$1 for three years. Address

Fruitman and Gardener
11 Main Street Mount Vernon, Iowa

BUY AND TRY

White River Flour

MAKES

Whiter, Lighter Bread

A New Discovery in the American Wine Industry

The American Department of Agriculture announces that there has been discovered at Washington a method for concentrating grape juice which promises to be the greatest discovery in the wine industry since Pasteur discovered the method of preserving light wines for the French government.

This new method is altogether novel, as it consists not in boiling down the juice, but in freezing the juice. The ice is then cracked into small pieces and whirled in a centrifugal machine; by this means all the sugar and thick syrup is separated from the ice, which is almost pure water. By this means a gallon of the syrup is reduced to one quart.

A peculiar phenomenon incident to this process is the fact that the cream of tartar crystallizes out with the ice and makes the acidity of the juice much less than normal. This is particularly true of the Concord grape juice, which has a large percentage of tartar in it.

This new method of freezing the juices to concentrate them preserves in a wonderful degree the natural purple color of the juice and makes the drink very much more beautiful in its rich purple appearance and more sparkling.

When the concentrated juice is sterilized afterward by heating it keeps indefinitely as a thick syrup. It can be used at soda fountains, as flavorings for cookery and other dietary purposes. The government hopes to exploit this latest discovery on a commercial basis this year, as it promises not only to give a fine quality of goods from the best grapes, but also the freezing method takes out the "rough" taste of many cheaper grades and gives a very fine article from the cheaper and coarser varieties.—Scientific American.

A Few Canning Hints

Have the canning plant properly installed before the fruits and vegetables begin to ripen. See that the cans, labels, cases, solder, flux, etc., are ordered immediately. Be sure to order the hole and cap cans, and specify in your order that you want solder-hemmed caps. Order the enamel cans for fruits if you wish to preserve the color, flavor and quality of the product. The soldering irons should be properly tinned if you wish to do a smooth job of soldering. This is done by heating the irons, then filing them until they are bright. The irons are now dipped in a zinc solution, then rubbed in sal-ammoniac to which solder has been added. When the cans are placed in the retorts keep up the pressure as recommended, and do not record the time until the thermometer registers the degree of heat recommended for handling the various products. For detailed instructions write for the Canning Bulletin, No. 82, Idaho Experiment Station, Moscow, Idaho.—C. C. Vincent, Horticulturist.

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

Let 'er Rain!

If you've a man's work to do, wear Tower's Fish Brand

**Reflex
Slicker
\$3.00**

The coat that keeps out all the rain. Reflex Edges stop every drop from running in at the front.

Protector Hat, 75 cents

Satisfaction Guaranteed

Send for free catalog

A.J. TOWER CO.

615 BOSTON



Harvey Bolster Springs

The standard springs of America since 1889. Make any wagon a spring wagon. Prevent damage to eggs, fruits, etc. on road to market. Soon have cost—produce brings more—wagon lasts longer—easier for driver—easier for horses.

Made Like Finest Auto Springs

Highest grade steel. Very resilient and durable. All sizes—fit any wagon up to 5 tons capacity. If not at dealer's, write for circular showing how Harvey Springs save money.

HARVEY SPRING CO., 784 17th St., Racine, Wis.

GUARANTEED

Protect Your Trees

Hawkeye Tree Protectors

Don't take chances with your young trees. One rabbit will kill many in a single night. Mice and cut worms will damage and destroy them if you don't protect them. Get dollars' worth of protection at a fraction of a cent cost by using

Absolute protection against gnawers and borers. Prevent trees from becoming skinned and bruised by cultivator or lawn mower. Made of elm veneer, chemically treated. Easily put on and will last until tree is beyond needing protection. Don't wait until some of your trees are killed—order Hawkeye Protectors now. Regular size 10 inches wide, 20 inches high. Price in lots of 100—1 cent apiece, in lots of 1000—1/2 cent apiece. Special sizes made to order. Write for circular and samples.

We make Fruit Baskets—get our prices.

Burlington Basket Company
122 Main St., Burlington, Iowa

SEPARATORS, ENGINES, SPREADERS

200,000 customers testify that my designers and factories build quality into them. Built for long, hard, continuous users' satisfaction. **HIGHEST QUALITY—LOWEST PRICES.** About 1-3 to 1-2 less than you usually pay. Don't buy till you get my catalog of these and other farm and household goods free. A postal gets it, Low freight rates.

Wm. Galloway Co., Bx 1055, Waterloo, Ia.

YOU CAN EARN \$50.00 PER DAY

with the Gearless Improved Standard Well Drilling Machine.

Drills through any formation. Five years ahead of any other. Has record of drilling 130 feet and driving casing in 9 hours.

Another record where 70 feet was drilled on 2 1/2 gal. distillate at 9c per gal. One man can operate. Electrically equipped for running nights. Fishing job. Engine ignition. Catalogue W.B. REIERSON MACHINERY CO., Manfra., Portland, Ore.

Pear Blight

Mr. Waite, a graduate chemist and druggist, with many years' practical experience in compounding chemicals, states that he believes he has found the cure for blight, which is a chemical preparation which, when applied, kills the germs by dissolving the exudation. While it is hoped that his remedy will prove successful, fruitgrowers in general are not inclined to believe in any remedy for the cure of blight. In fact they will not believe that there is any method of controlling blight except the cutting-out process until such a remedy has been proven positively effective.

Mr. Anthonie van Diem, of the firm of W. van Diem Company of Rotterdam, Holland, called at "Better Fruit" office in July, this being his first trip to the United States. The firm of W. and W. U. van Diem was started in 1860, and imported Northwestern fruits as far back as 1895. Mr. van Diem left Holland on this trip on the steamship Rotterdam June 12, 1915, the voyage taking twenty-one days. His experience was quite interesting. The steamship was held up several times by British and German boats, but after leaving the Irish coast he had a very pleasant trip. Mr. van Diem was very much impressed with the City of New York, which he saw for the first time. He arrived in Portland July 18th, being entertained in that city by Vice-Consul of the Netherlands, Mr. Berghuis-Krak and his friends. On July 22nd he came to Hood River, calling on the editor of "Better Fruit," in which paper the firm has advertised for a number of years. He was also entertained by Mr. Wilmer Sieg, sales manager of the Hood River

What are your dairy problems?

To get started profitably in dairying as a side-line, the fruit grower needs helpful advice and suggestions.

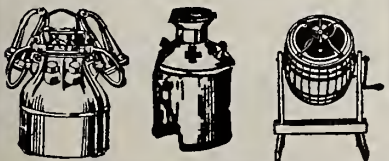
Our service department will delight in doing this very thing, without any charge or obligation.

We are sole Oregon distributors for "Simplex" Separators, B-L-K Milkers, Papec Ensilage Cutters, Simplex Silos and all kinds of dairy, butter-making and cheese-making supplies.

Your name on a postal will bring Free Catalogs

Monroe & Crisell

126 Front St. Portland, Oregon



Lime Sulphur
Lead Arsenate
Bordeaux Paste
Spra-Sulphur

The most serious pests and diseases doing the most damage to trees in the Northwest are San Jose Scale and Anthracnose. The ones doing the most damage to crops and causing a loss of millions annually to fruit growers, are Codling Moth and Scab.

Growers Must Have Sprays that are Efficient

We make the above sprays of the highest degree of efficiency and sell at reasonable prices.

Clean crops are necessary if you expect to sell your apples at good prices.

Use Our Sprays and Grow Clean Fruit

Factory at Clackamas, Oregon.
New factory being built at Hood River, Oregon.

For the present direct all correspondence to

Oregon Arsenical Spray Co.
CLACKAMAS, OREGON

Pacific Coast Agents
United States Steel
Products Co.

San Francisco
Los Angeles
Portland
Seattle



J.C. Pearson Co., Inc
Sole Manufacturers

Old South Bldg.
Boston,
Mass.

PEARSON
ECONOMY in buying is getting the best value for the money, not always in getting the lowest prices. PEARSON prices are right.
ADHESIVENESS or holding power is the reason for PEARSON nails. For twenty years they have been making boxes strong. Now, more than ever.
RELIABILITY behind the goods is added value. You can rely on our record of fulfillment of every contract and fair adjustment of every claim.
SATISFACTION is assured by our long experience in making nails to suit our customers' needs. We know what you want; we guarantee satisfaction.
ORIGINALITY plus experience always excels imitation. Imitation's highest hope is, to sometime (not now) equal Pearson—meantime you play safe.
NAILS



Make Your Old Trees Bear

Why let the old trees go to rack and ruin. Make them produce. Make them pay renewed interest on your past investment. Regenerate those old orchards and make the old trees bear.

DU PONT Red Cross Dynamite

will help you. By blasting and breaking up the subsoil around the trees, a new water reservoir is created, new plant food is made available and the old trees will be made to produce as well as before.

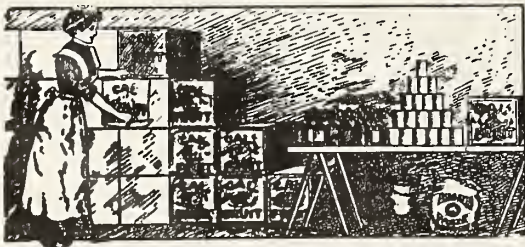
To learn how progressive orchardists and farmers are using dynamite for cultivating fruit trees, regenerating barren soil, ditching, draining, stumping, removing rocks and boulders and scores of other things, write for our well written and illustrated booklet F-338.

Established
1802

Du Pont Powder Company

Wilmington
Delaware

Paste for Labeling—"Palo Alto" Paste Powder



added to cold water, instantly makes a beautiful, smooth, white paste. Ready for immediate use at a cost of 10 cents a gallon. No labor. No muss. No spoiled paste.

PASTE SPECIALISTS
Robinson Chemical Works
349-351 Eighth Street
San Francisco, California

More About Walnuts

Why raise wheat and oats on land suitable for walnuts when the returns scarcely justify the labor expended, with very little income on your investment?

Our 6 and 7-year-old grafted VROOMAN FRANQUETTES are bearing several times as much net income this season as our wheat and oats. What will the difference be when the trees are 12 to 15 years old? We would estimate 10 to 15 times as much.

Why raise grain and sell it on oversupplied foreign markets at a low price when we are importing 10,000,000 to 12,000,000 pounds of walnuts that are not nearly as good and sell for a lower price than those we can raise here at home?

Many owners of seedling orchards of bearing age this season have applied to us for capable men to top-graft their orchards. This must be done at great expense and loss of time. Don't make this mistake, as others are now paying for this experience. We helped to pay for it by working over 800 seedlings ourselves.

Come this month before the nuts drop and compare our orchard with seedling orchards.

Write for our booklet, "Walnut Growing," and prices on GRAFTED VROOMAN FRANQUETTE walnut trees.

FERD GRONER & McCLURE, Hillsboro, Oregon

Apple Growers' Association. He stated he was much impressed with the beauty of Hood River scenery and its up-to-date orchards. Another thing which he spoke of particularly was the immense cold-storage plant and facilities of the Hood River Apple Growers' Association. Mr. van Diem left Portland July 23rd, via Seattle, intending to visit a number of other points on his trip, among them Chicago, Buffalo and Niagara Falls, expecting to reach New York August 3rd and sail on that day for home. The object of Mr. van Diem's visit was to make arrangements for such apples as his firm would require during the coming season and to form a more intimate acquaintance with the shippers of the Northwest with whom he has done business for many years, and with whom he expects to do a larger business in the future.

The peach crop of the Northwest in the year 1915 is reported about normal. Peaches in the Northwest have been packed exclusively in boxes, but in various other sections of the United States many other kinds of packages have been used for years, among which may be mentioned the bushel basket, the half-bushel basket, the six and four-basket crate, the Climax basket, containing one-fifth bushel; also one-sixth of a bushel and a twenty-pound package containing about one-third of a bushel. In Delaware and New Jersey the half-bushel basket is used quite extensively. The six-basket crate is more extensively used in the Middle West. Along the Atlantic Coast and in the Southern peach sections, as well as Virginia, the package used contains six baskets holding four quarts each. In California peaches are usually packed

HONEST TREES AT HONEST PRICES

Order your trees direct from longest established, most reliable nursery in the West. Save money—avoid disappointment. 500 acres—50 years thoroughly reliable dealings. Get our list and prices before you buy a tree : : :

**THE
WOODBURN NURSERIES**
Woodburn, Ore.

Store Your Apples in Spokane

The Natural Storage Center

Take advantage of storage in transit rate and the better market later. Write us for our dry and cold storage rate and information.

**Ryan & Newton
Company**

SPOKANE, WASHINGTON

in boxes containing twenty-one and one-half pounds. In Arkansas the six-basket crates are generally used; also in Georgia, Tennessee and Carolinas. Texas uses the four-basket crate most extensively. Michigan uses largely one-sixth, one-fifth and one-third Climax baskets, also bushels and short-bushel baskets, with a few of the half-bushel baskets. Ohio uses mostly the round bushel basket with very few other styles. Kansas ships usually in four-basket crates; West Virginia, Pennsylvania and Maryland use one-half bushel baskets and also six-basket carriers. It would look as if some step ought to be taken if possible for a more uniform package in marketing peaches, and that a federal law similar to the apple-barrel law would be desirable.

A North Yakima peach grower is experimenting with peach baskets this year which have been used almost exclusively in handling the peach crop in the East and Middle West. It is reported that he has ordered enough baskets to ship out eight or nine carloads. These baskets will weigh approximately 60 pounds and a carload will contain about 400 baskets. On account of the popularity of the basket in handling the peach crop it has been extensively used. While not posted on the prices of baskets it is reasonable to assume that inasmuch as they are used so extensively in the East that they are not only more economical in packing the crop but that this package is more attractive to the consumer and more convenient to handle.

It is reported that the North Pacific Fruit Distributors sold a carload of Lambert cherries to Steinhart & Kelly which realized \$2,350 gross.

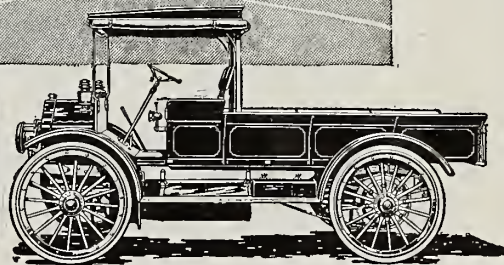


Ask for Catalogue No. 5

"The Farmers Friend"

In Handy Buckets Also Small Cans

Ask your Dealer



International Motor Trucks

THERE is one advantage in using an **International Motor Truck** that fruit growers and truck farmers are likely to lose sight of. The truck, traveling faster than horses, brings about one important economy.

Twenty to forty miles of daily travel, with the necessary stops, keep the horses and driver busy all day.

With an **International Motor Truck** the driver can start later in the morning and pass every horse-drawn rig on the road. He'll be back early and can put in the best part of the afternoon at productive work on the farm. That gain is enough to make a motor truck pay.

The driver's time on the road is an expense, his time on the farm a profit. An **International Motor Truck** saves you this expense and gives you this profit.

This is only one of many reasons why every fruit grower or truck farmer should use an **International Motor Truck**. Drop us a line and we'll send you more reasons and full information. One of our three trucks—a Model "M," for 1,000-lb. loads, a Model "E," for 1,500-lb. loads, or a Model "F," for 2,000-lb. loads—will fit into the conditions of your work. A post card to us may save you many dollars of expense. Send it today.

International Harvester Company of America
(INCORPORATED)

Crawford, Neb. Denver, Col. Helena, Mont. Portland, Ore.
San Francisco, Cal. Spokane, Wash. Salt Lake City, Utah

D. Crossley & Sons

ESTABLISHED 1878

Apples for New York and Export

CALIFORNIA, OREGON, WASHINGTON, IDAHO AND
FLORIDA FRUITS

Apples handled in all European markets at private sale. Checks mailed from our New York office same day apples are sold on the other side. We are not agents; **WE ARE SELLERS**. We make a specialty of handling **APPLES, PEARS AND PRUNES** on the New York and foreign markets. Correspondence solicited.

200 to 204 Franklin Street, New York

NEW YORK

LIVERPOOL

LONDON

GLASGOW

Ridley, Houlding & Co.

COVENT GARDEN, LONDON

Points to remember when consigning
apples to the London Market

1.—We Specialize in Apples

2.—All Consignments Receive our
Personal Attention

3.—The Fruit is Sold by
Private Treaty

CABLE ADDRESS: BOTANIZING, LONDON

PORTLAND, OREGON

Portland Hotel

The hotel which made Portland, Oregon, famous
Most Desirably Located. In the Center of Shopping and Theatre District
Covers a City Block.

Broadway, Sixth, Morrison and Yamhill Streets
European Plan—\$1.00 per day and upward

Write for Portland Hotel Booklet.

GEO. C. OBER, Manager

Arcadia Irrigated Orchards

THE LARGEST AND MOST SUCCESSFUL ORCHARD PROJECT
IN THE ENTIRE WEST

7,000 acres planted to winter apples. Gravity
irrigation. Located 22 miles north of Spokane,
Washington, directly on the railroad. We plant
and give four years' care to every orchard tract
sold. \$125, first payment, secures 5 acres; \$250,
first payment, secures 10 acres; balance monthly.

SEND FOR BOOKLET

Arcadia Orchards Company
Deer Park, Washington

W. S. Ballard, plant pathologist, associated with the Department of Agriculture, has been making a visit in company with T. O. Morrison of the State Agricultural Department of Washington, inspecting the orchards in Yakima Valley. Dr. Brooks, associated in this campaign, is an expert on powdery mildew and other pathological diseases. Professor W. S. Ballard has an extensive acquaintance among fruitgrowers on the Pacific Coast as well as in the East, and is an expert on pear blight and many other diseases of fruit.

George Watts, an apple grower of Millerdale in the Wenatchee district, is reported as having sold his crop of 8,000 boxes, orchard run, at \$1.25 per box.

The Spokane Fruit Growers Co. reports that they shipped about 22,000 crates of strawberries, averaging the grower \$1.59 per crate.

Coming Events

Wilbur Fair, Wilbur, Washington, October 5 to 8.

Stevens County Livestock Show, Colville, Washington, October 26 to 29.

Arizona State Fair, Phoenix, Arizona, November 8 to 13.

Cascade International Stock Show, North Yakima, Washington, November 22 to 27.

Lewisston Livestock Show, Lewiston, Idaho, November 29 to December 4.

Pacific International Livestock Exposition, North Portland, Oregon, December 6 to 11.



FREE "Ask Pratt"

Here's a book of daily needs you should keep handy. It lists the best of every thing for the orchardist and truck grower. Standard spray materials, harrows, cultivators, graders, pickers, packing boxes, etc. If there's anything needed, "ask Pratt." You know him—he's the man who makes "Salecide—the tree saver." Everything else he sells is just as good.

Our Service Department

is under his direct supervision and he is always ready to advise, from his long experience, just what implement, spray material, etc., you need. Ask questions. But send for the book today.

B. G. PRATT COMPANY

Dept. D

50 Church St., New York

A NEW OPPORTUNITY IN THE WEST OKANOGAN IRRIGATION DISTRICT

9,400 acres bordering the Okanogan River will be irrigated with the completion of this project. This section combines the soil and climate of the most favored fruit growing districts of the state, with unusual opportunities for dairying and stock growing. A farm unit of 40 acres has been established and a price fixed on the excess acreage of land by the Board of Directors, which enables the homeseeker to purchase high class irrigated land at prices lower than prevailed twelve years ago in irrigated sections of Washington.

Send for our FREE publication with map and full description of country.

F. W. GRAHAM
Western Immigration
Agent
Great Northern Ry.
Seattle, Wash.
I.F.





The Inside Inn

is a beautiful, permanent, up-to-date hotel occupying a magnificent site within the grounds of the Panama-Pacific International Exposition, amidst the most wonderful setting of scenery and architectural beauty the world has ever known. The Inside Inn is but a short walk from the State and Foreign Buildings and practically surrounded by the main Exhibit Palaces.

Appointments throughout the hotel are first-class. Following are our general rates:

European plan, without bath, per day \$2, one person
European plan, without bath, per day \$3, two persons
European plan, with bath, per day, \$3 to \$5, one person
European plan, with bath, per day, \$4 to \$7, two persons

Our motor busses meet all trains and steamers.

We shall be glad to give you any general information in regard to the Exposition or side trips upon request.

ALBERT BETTENS, Manager

California

DIRECT ROUTE
TO

Portland

Ocean Liner or
Shasta Route Rail Service
TO

San Francisco

Steamship, Coast Line
or Orange Grove
Rail Trip
TO

San Diego

Liberal Stopover
Privileges
Diverse Routes Both Ways
if Desired

THIS YEAR has held more
of interest, of wonder, of
beauty, of pleasure, than ever
before—possibly ever again.

THE WORLD-FAMOUS EXPOSITIONS

are now at their best. The opportunity to visit them is
nearing its end—go now.

Information, tickets, reservations, etc., upon
application to your local agent.

Write the GENERAL PASSENGER AGENT, Portland
for your copy of
"California and the Expositions."

OREGON-WASHINGTON RAILROAD & NAVIGATION CO
UNION PACIFIC SYSTEM



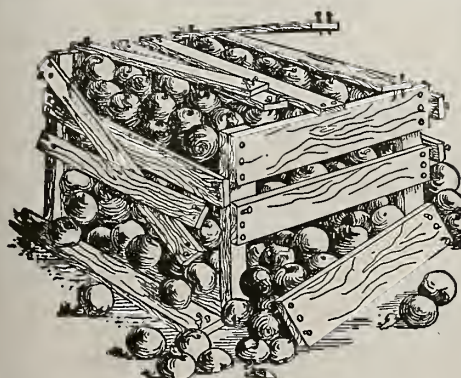
The First National Bank

Hood River, Oregon

**Capital and Surplus
\$135,000**

**4% Interest Paid on Savings
and Term Deposits**

**F. S. STANLEY, President
E. O. BLANCHARD, Cashier**



BEFORE using Cement Coated Nails

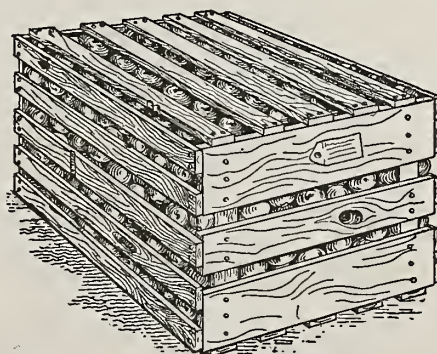
Western Cement Coated Nails for Western Growers

Our Cement Coated Nails are always of
uniform length, gauge, head and count. Especially adapted to the manufacture of fruit
boxes and crates. In brief, they are the
Best on the Market.

Write for Growers' testimonials.

Colorado Fuel & Iron Co.
DENVER, COLORADO

Pacific Coast Sales Offices
Portland, Spokane, San Francisco
Los Angeles



AFTER use of C. F. & I. Co.'s
Cement Coated Nails.

The World

Our Orchard

IN ALL FIELDS OF ENDEAVOR no work is more worthy of recognition than that of the salesman. To be successful these pioneers of commerce must possess attributes which would bring world wide recognition to men in other walks of life.

The salesmen of our country are largely responsible for the development of the great industries which are the bulwark of the nation. Most leaders of business were at one time salesmen; nearly every self-made man has served on the firing line of salesmanship. No house in the trade had humbler beginnings than the firm of

Steinhardt & Kelly

Built upon the fundamental principles of

Honor, Honesty, Strength and Service

which are the foundations of all successful business enterprises, the house of

Steinhardt & Kelly

stands today preeminent at the very top of the fruit industry of the United States.

Our Market

The World